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ABSTRACT

This report describes the design and development of the MASTER program, an autoinstructional model to supplement introductory foreign language courses, and examines its application in two French language courses offered at Brevard Community College. The first sections contain introductory material, a review of the literature on second-language acquisition and instructional systems, and a discussion of the procedures and methods used to develop and implement the MASTER program. Information on the identification of performance and training requirements, instructional methods, and testing procedures is included, along with samples of the instructional materials and drills used. Results of the use of the MASTER program are then reviewed in terms of the conduct and evaluation of learning activities, administration of course materials, self-assessment testing, and conditions and acts of learning. An evaluation of various instructional methods (e.g., lecture, demonstration, recital, and discussion) and instructional media (e.g., tutorial, environmental, print, visual aids and audiovisual methods) concludes this section. The final section discusses aspects of instructional methodology and media, recall and performance, and curriculum development and offers recommendations. The bulk of the report consists of appendices including a socio-topical matrix for professional career fields, a summary of French language rules, a glossary, self-assessment forms, and the MASTER program evaluation form. (LL)

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ED230243

DESIGNING AND DEVELOPING A MANAGEMENT/ AUTOINSTRUCTIONAL SYSTEM, TEST, EVALUATION, AND REVIEW (MASTER) PROGRAM FOR SECOND LANGUAGE ACQUISITION

A Practicum

Presented to

the Faculty of the Management Institute

Brevard Community College

Cocoa, Florida

In Fulfillment

of the Requirement for

Internationalizing Curriculum

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by

Harold Elton Branham, Jr., Ed.d.

International Division

September 1981

JC 830 255

ABSTRACT

DESIGNING AND DEVELOPING A MANAGEMENT/ AUTOINSTRUCTIONAL SYSTEM, TEST EVALUATION, AND REVIEW (MASTER) PROGRAM FOR SECOND LANGUAGE ACQUISITION

INTERNATIONAL CURRICULUM BREVARD COMMUNITY COLLEGE

The purpose of this practicum was to design and develop an autoinstruction program to supplement foreign language courses offered at the introductory level.

This study was based on the proposition that the full-time and expensive operation of language programs can be supplemented by the inexpensive possession of on-the-shelf instructional materials, if a portion of training were carried out on a self-instructional basis.

The results of this study indicated that the MASTER Program created by this practicum can be implemented at the introductory level, providing a comprehensive resource unit for the management, autoinstruction, testing, evaluation, and review of the foreign language curriculum. Thus, the aim of this report is to outline possible methods of testing communicative ability and guided self-assessment in second language acquisition, and to suggest approaches that might be taken in order to further develop methods judged suitable for use within the MASTER Program.

The sections of this practicum that deal with self-assessment techniques are necessarily of a tentative nature. However, the importance of involving the learner in the task of evaluation is emphasized in this study, to give the student a greater responsibility for determining the pace of his own learning. Thus, the MASTER program is intended to suggest that procedures and methodology along with further research and development work might yield fruitful outcomes, rather than to recommend detailed and finalized procedures for immediate use by others.

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INTRODUCTION

The purpose of this study was to design and develop an autoinstructional program to supplement foreign language courses offered at the introductory level.

Problem

The full-time and expensive operation of foreign language programs conducted in formal school settings with live instructors and language laboratories could be supplemented by the inexpensive possession of on-the-shelf instructional materials, if a portion of training, particularly at the introductory level were carried out on a self-instructional basis.

Description of the Investigation

The study was based on the development of a system model to provide variable length language training for students needing such skills for their career field or profession, and for students who could not be timely fitted into the traditional French One in-class school program.

Essentially, the study involved designing instructional materials useful for the beginning student, and as refresher training for students whose language skills have not been fully developed, or for those whose skills have deteriorated with disuse.

Background and Significance

Until quite recently, virtually all research on the acquisition and use of second languages was related directly to practical problems of foreign and second language instruction and to attempts to relate the general work of behavioral psychologists and linguists to these problems. Chomsky (1966, p. 29) expresses skepticism concerning "the significance, for the teaching of languages, of such insights and understanding as have been attained in linguistics and psychology." However, Chomsky's recommendation that we replace these efforts with generative grammar does not improve the situation. That is to say, even if theory both in linguistics and behavioral psychology were well established, only research and development in second language acquisition itself could determine what aspects of such theories are relevant to foreign language teaching (Ritchie, 1978). The following review of literature deals with second language acquisition, instructional systems, and their relationship to this study.

Second Language Acquisition

Second language acquisition, according to Dulay and Burt (1972), is a technical term that refers to the "creative construction" process found in children's first and second language learning. Krashen (1975) claims that adults have access to this process as well. Most second language teaching methods designed for adults presume that language learning, as opposed to language acquisition, is at least the central if not the only means available to adults for internalizing linguistic rules. There is, however, suggestive evidence that adults can and do acquire, although younger acquirers utilize just language acquisition in production (Cazden, 1975).

Given such an understanding of second language acquisition, how would it bear on the practical problems of language teaching and vice versa? Schachter (1974) argues that acquirers of second languages tend to avoid in production those grammatical structures which appear, on the basis of psychological analysis and certain linguistic assumptions about the second language acquisition process, to be difficult for them in the initial stages of the learning process. Anderson (1976, 1977a, b) presents some data that appear to require a similar interpretation. His experiments involved scaling and graphing data from individual learners, and retaining the detailed information which most grouping and statistical summaries lose. The author suggests that some acquirers adopted a guessing strategy, and others an avoiding strategy in responding to difficult structures included in his experimental instrument.

Probably the most relevant research to support the self-instructional concept is in reports by Krashen (1976), who states that initiation of utterances in second language performance occurs according to what the performer has acquired through natural language use, that is, by rules internalized in ways similar to the way children acquire language; without overt teaching on the part of native speakers.

Wilga Rivers (1964, p. 153) argues that "in order to bring about good transfer of set and attitudes, the classroom must stimulate real life as closely as possible." She states that as important as it is to make clear to the learner what he or she is doing, it is equally important "to relate the drills to" the student's own interest. This suggests the use of both existential and analytic philosophy to the understanding of language. The treatment of language or discourse by the philosophers Martin Heidegger (1960), Ludwig Wittgenstein (1958), and Rudolph Carnap (1937) has important significance here.

In Heidegger's Being and Time (1960), what seems important is the insistence that language be understood as a human phenomenon or an existentiale. Naturalistic accounts of language have concentrated attention on the question of how language refers to things and events in the world. Certainly this is one dimension of language, but there are other dimensions as well, and it is to these that Being and Time directs the reader's view. According to Heidegger, in language, man expresses himself as Dasein, that is to say, his own being-in-the-world, and likewise he communicates with the other. Wittgenstein's argument appears to move in the direction of Heidegger's concretness when he insists on setting language in its living context (see Macquarrie, 1955, p. 25).

Wittgenstein's main device, in his Philosophical Investigations (1958), is to invite us to consider extremely simple kinds of language, or uses of language. Usually we are asked to consider people engaged in simple operations. In such contexts we can more easily survey the purposes and functions of words.

> . . . how many kinds of sentences are there? Say assertion, question, and command? - There are countless kinds: countless different kinds of uses of what we call 'symbols,' 'words,' 'sentences.' And this multiplicity is not something fixed, given once and for all; but new types of language, new language-games, as we may say, come into existence, and others become obsolete and get forgotten . . . (p. 1).

Wittgenstein invents the term "language-game" to bring into prominence the fact that the speaking of language is part of an activity, or of a "form of life." The crux of his argument is that one cannot safely assume that what one finds to be true of one kind of language applies to another. Carnap, by the same token, suggests that we do away with taboos of any particular linguistic forms or frameworks, and that everyone is at liberty to build up his own logic, i.e., his own form of language, as he wishes.

The realization of his own neutrality toward the traditional philosophical positions came to Carnap at the time he was working on his principle work, Der Logishe Aufbau der Welt. Carnap's words in his The Logical Syntax of Language (1937, p. 52) are in fact an appeal for tolerance:

> To decree dogmatic prohibitions of certain linguistic forms instead of testing them by their success or failure in practical use, is worse than futile; it is positively harmful because it may obstruct scientific progress . . . let us be cautious in making assertions and critical in examining them, but tolerant in permitting linguistic forms. (Carnap's italics)

This concept of language is related somewhat to Wittgenstein's "instrumentalism and contextualism" where a language is viewed as not something that can be understood and characterized independently of specific activities, objectives, circumstances, or "forms of life" in which words and sentences are used. For to be alive is to be aware of oneself, to be aware of oneself is to hear one's thoughts, that relentless stream of words. Wittgenstein remarks that (1958, pp. 11, 12):

> It is interesting to compare the multiplicity of the tools in language and of the ways they are used, the multiplicity of kinds of words and sentence, with what logicians have said about the structure of language.

The existence of cognitive uses of language is obvious enough, but equally so is the existence of any number of non-cognitive uses, in which words are used to express feelings and attitudes, to transmit orders, to bind the speaker to future performance, and so forth. A striking feature of twentieth-century studies of language has been an increasing realization of the central and crucial role of "non-cognitive" aspects of language, in fields as diverse as aesthetics, ethics, philosophy, education, politics, and literature.

But even more significant than these tendencies in philosophical thinking is the trend of the times in the workaday world of the man in the street, or the student in the classroom. Apart from the general devaluation of language in the flood of mass communications, the growing specialization of life has made the change of ideas on an increasing number of subjects virtually impossible between members of different career fields or subject areas which have each developed their own specialized language. Carroll (1966, p. 105) stresses the role of communication in verbal learning processes when he says that "the more meaningful the material to be learned, the greater the facility in learning and retention." Halliday (1964, p. 182) puts it bluntly when he says that "human beings learn more rapidly and effectively if they have a reason for doing so."

Instructional Systems

The literature on instructional systems focuses on curriculum reform, especially for higher education. The emphasis is upon a clear definition of instruction/learning goals, attention to learner characteristics, assessment of learner needs and status, and the continuous evaluation and evolutionary improvement of the learning system itself. Kemp (1977) presents the significant elements of instructional design as applied, especially, but not exclusively, to courses in higher education institutions. The author assigns crucial importance to the following components of the instructional design process: (1) goals, topics, and general purposes; (2) learner characteristics; (3) learner objectives; (4) subject content; (5) preassessment of learner status with respect to objectives and content; (6) teaching/learning activities and resources; (7) support services; and (8) evaluation.

An older but still useful survey of innovative teaching by Brown and Thornton (1968) stresses the "systematic approach" including the following steps and procedures: (1) organize course content, by arranging it in optimum order and sequence for learning; (2) produce, transform, and pattern the content into suitable modes and forms for student access; (3) test and validate materials prior to large-scale use; (4) present and regulate interactions of students with instructional materials and learning experiences; (5) assess or evaluate student reactions, performances, and achievements; and (6) use such information as a principal basis for revising and improving instruction.

Diamond et al. (1975) provide a useful handbook which outlines specific procedures necessary to achieve successful academic innovations in higher education. Individualized instruction is identified as the first frame of reference and the essence of the curriculum design process. The authors present varied opportunities for student diagnosis, optional content study, alternate forms and flexible times for the evaluation of students, and options with respect to locations in which instruction and learning experiences are conducted, and alternate forms of instruction, including independent learning materials and instructional modes.

Gagné and Briggs (1974) offer a manual of the theoretical principles underlying systematic curriculum design, along with procedures required to accomplish it. This book includes arrangement of topics, courses, and lessons of instruction, in a variety of subjects, based upon principles of human learning and performance analysis. The authors explain basic design considerations pertaining to: (1) outcomes of instruction; (2) intellectual skills and strategies, and (3) types and varieties of learning, information, and attitudes. The section dealing with "designing instruction" stresses: (1) defining performance objectives; (2) designing instructional sequences; (3) identifying instructional events; (4) designing individual lessons; and (5) assessing student performance. The final section of the book discusses "instructional systems" under such categories as individualized instruction, designing instructional systems and evaluating instruction.

Relationship to Curriculum

The non-traditional approach advocates a learner-centered and student-oriented program. Thus, the instructor is expected to make a consistent attempt to fully utlize what are judged to be the most effective pedagogical techniques from the fields of programmed instruction, modern classroom teaching, group and individualized instruction, tutorial instruction, and learning theories from behavioral, cognitive, and phenomenological movements in psychology and philosophy. Cross and Valley (1974) and Vogel (1975) address the question of the use of modules, audiotutorials, individualized learning contracts, and learning resource centers. In an attempt to search for alternatives to the traditional, Milton (1972) provides research evidence that destroys several commonly cherished myths about learning and teaching, which should force curriculum designers to question their beliefs.

Research has shown that language learners not required to speak immediately - though they are allowed to do so if they wish - make more significant gains in reading, writing, and speaking, as well as in listening comprehension, than students required to speak right away in a typical audio-lingual approach (Winitz, et al. 1973; Postovsky, 1974; Lenneberg, 1962). With respect to cognitive learning, there is strong empirical evidence that having to focus simultaneously on speaking performance and on listening comprehension distracts the learner from his main interest: understanding the language system underlying what he is learning (Postovsky, 1975). Experimental studies by Asher (1969) and Postovsky (1970, 1974) support this position, showing a high degree of transfer between a listening-only focus and other language skills.

With respect to affective learning, for many students, particularly adults, an attempt to immediately produce sentences in front of their peers is very stressful and embarrassing and reduces the student's concentration and effectiveness in language learning (see Gary, 1974). Indeed, students generally prefer not to speak a language whose rules and meaning they have only imperfectly perceived, let alone internalized (Sorenson, 1967). Ingram et al. (1974) have pointed out that even in conversation the need for listening skills far exceeds the need for speaking skills.

With respect to experiential education, the case is that in second language learning there is a considerable lag between the development of the student's receptive competence and his or her functional literacy. That is to say, that students can acquire a language much more efficiently if they do not have to worry about producing all the language data to which they are exposed. Furthermore, language learners who have been taught to capitalize on the advantages of an experiential approach to language learning can easily continue their language study alone, independently of a particular language program, by listening to the radio, watching films and television, and reading.

There remains an infinite variety of interesting possibilities to be explored with respect to the delayed oral practice approach. Yet, there are many questions unresolved regarding its optimal effectiveness in curriculum engineering. Some of the interesting questions remaining to be explored are: For particular age groups and learning styles, what is the most appropriate amount of extended listening practice before requiring speaking? How can this approach be optimally used to individualize instruction? It appears that this approach lends itself to infinite possibilities for individualization, of instruction, utilizing tape recordings, filmstrips, movies, video cassettes, radio, television, computer-assisted instruction, and other valuable teacher supplements.

Testing, assessment, and evaluation are also necessary aspects of a language learning curriculum. In this study, evaluation is not viewed as a means of imposing the objectives of an authoritarian technocracy upon the target population, but as a means of enabling the student to achieve more effectively those objectives corresponding to his or her needs. Hence, it is proposed that evaluation procedures, including self-evaluation, will be needed to involve the learner in the question of assessment.

A survey of literature relevant to self-evaluation of foreign language efficiency revealed that most of what has been done in the field involves self-administration of regular tests. In connection with an investigation by Balke-Aurell (1977), the self-assessment instrument consisted of a questionnaire setting out a variety of sociolinguistic situations. The subjects were requested to rate their linguistic ability to cope with each situation on an eleven-point scale, and were also asked to assess their general proficiency in each of the four language skills: listening, speaking, reading, and writing. Several analyses were made, including intercorrelation between self-assessment scores, ratings by the assessors, and formal test scores. Formal test results correlated no higher than self-assessment scores with the instructors' judgments (coefficients ranging from .40 to .60). Self-assessment scores and formal test results correlated around .50. It was concluded that self-assessment techniques need not be very much inferior to formal testing procedures in respect of general information yielded.

The idea of putting the learner and his needs in the foreground is not new, at the Center de Recherches et d' Applications Pédagogiques en Langues (CRAPEL) of the University of Nancy, for instance, the notion of student-centered learning is one among several areas which have received particular attention (see Cembalo and Holec, 1973). The focus of learning is on the learning process, not on the activities of the teacher. The most important task of the teacher is to make the learner aware of the different approaches to language learning available in order to enable them to make an informed personal choice of goals and methods. This means that in addition to student-centered methods, the learner who so wishes can study the language in a traditional kind of learning situation with a conventional teacher-student relationship and text-centered methods of teaching.

Thus, the teaching strategy which respects the special conditions of the learner is one which allows the student to teach himself and to be himself (Riley, 1976). Evaluation consists of the learners' more or less subjective views of the savoir-faire they have acquired and the perception of their attainment of self-established goals (Abe et al. 1975). The key question the learner is advised to ask himself is: Can I perform to my own satisfaction?

The answer is "No," in most cases, then the learner will have to decide whether he needs some sort of evaluation of his standards, and, if so, what form such evaluation should take. It is emphasized that "self-evaluation" of this type cannot be considered final, since communicative ability (which is the learner's ostensible goal) is determined by many factors which only the learner is in the best position to judge. Among these are, of course, purely psychological characteristics such as the ability to adjust to new situations (language games) and the ability to interpret through the use of avoidance (telegraphic communication), or effectively use para-linguistic signals for communication (signs and gestures).

The best indication of the learner's linguistic competence is of course real verbal interaction in the free exchange with native speakers. However, before the learner has reached the stage where he or she is ready to converse with a native speaker, communicative ability can usually be tested in conversation with a matched peer. This peer-matching system, whereby learners who are at approximately the same proficiency level meet, also provides not only an opportunity for the learner to measure his or her performance against that of someone else; but also it essentially gives the student an opportunity to confront real situations which will provide feedback for a more construction self-evaluation (Candelier, et al. 1975, 1976).

It should be noted that the literature review relative to self-assessment was directed primarily at the evaluation of curriculum, not learning itself. However, the means used, when completed, allows the self-learner to compare his program with learners in other programs, by the ease in which he or she exhibits communicative ability in a real life situation with authentic documents, native speakers, etc. (see Henner Stanchina, 1976).

PROCEDURES

The procedures and methodology used to design and develop an autoinstructional program to supplement foreign language courses offered at the introductory level are as follows:

Population

The target population for this study was the student body on the freshman and sophmore level.

Sample

The sampling frame consisted of students enrolled in FR 382G (n-25), and FR 383G (n-23), "French Language for Career Fields."

Method of Data Collection

The general taxonomy of the instructional system contained five essential components: (1) management; (2) autoinstruction; (3) test; (4) evaluation; and (5) review. The compilation of data provided the basis for a Management/Autoinstruction System, Test, Evaluation, and Review (MASTER) program designed and developed to produce techniques for an introductory level course in the French language. The instructional system was divided into five separate but interdependent steps: (1) language performance requirements; (2) language training requirements; (3) objectives and tests; (4) autoinstructional development and validation; and (5) conduct and evaluation.

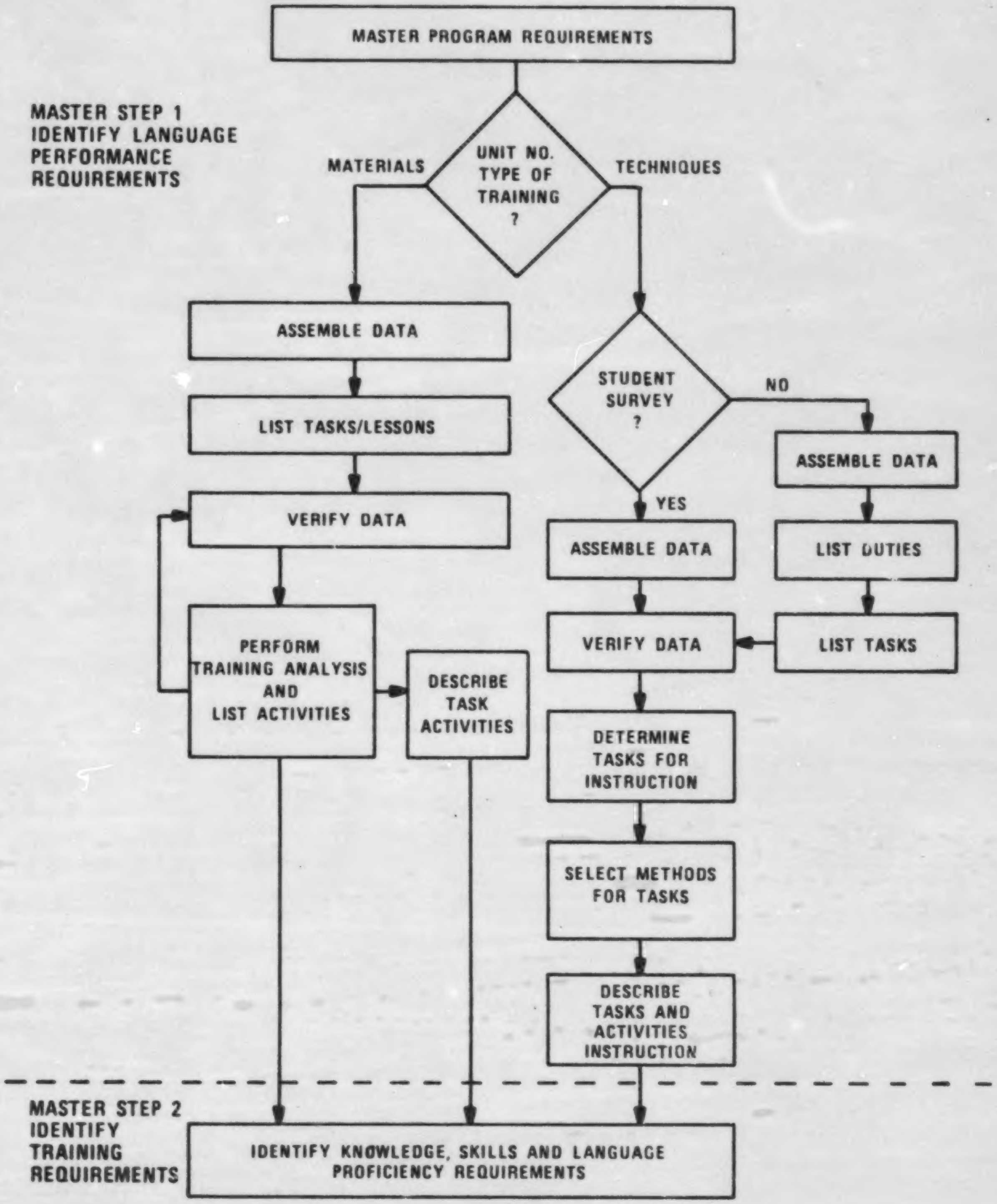
Data compiled for **Step** 1 of the MASTER program involved identifying language performance requirements (see Figure 1 for an algorithm of Step 1 of the MASTER program).

Identify Language Performance Requirements

Language performance requirements were based on how well the instructional system was designed to meet the needs and demands of the students enrolled in FR 382, 383. The system would not be considered satisfactory until it had demonstrated that it was able to satisfy individual language requirements. Therefore, data was compiled in each of three dimensions: (1) linguistic; (2) social; and (3) topical.

Linguistic Content

The data for linguistic content was obtained from the Foreign Services Institute text: French Basic Course. This selection of text material provided a linguistic dimension which was relatively independent of any particular career or subject area interest. The content of the French Basic Course consists of mostly phonological patterns and structural devices prepared for the audio-lingual approach. Social and topical content is not overly emphasized. However, the text was designed to be plausible and appropriate for illustrating a series of linguistic points via actual use of the language. For the purpose of this study, these points were qualified into a logical sequence and identified by a hierarchical set of grammatical rules (see Table 1 for an outline of French rules).


MASTER PROGRAM REQUIREMENTS
MASTER STEP 1
IDENTIFY LANGUAGE
PERFORMANCE
REQUIREMENTS
MATERIALS
UNIT NO.
TYPE OF
TRAINING
?
TECHNIQUES
ASSEMBLE DATA
LIST TASKS/LESSONS
VERIFY DATA
PERFORM
TRAINING ANALYSIS
AND
LIST ACTIVITIES
DESCRIBE
TASK
ACTIVITIES
STUDENT
SURVEY
?
NO
YES
ASSEMBLE DATA
LIST DUTIES
LIST TASKS
ASSEMBLE DATA
VERIFY DATA
DETERMINE
TASKS FOR
INSTRUCTION
SELECT METHODS
FOR TASKS
DESCRIBE
TASKS AND
ACTIVITIES
INSTRUCTION
MASTER STEP 2
IDENTIFY
TRAINING
REQUIREMENTS
IDENTIFY KNOWLEDGE, SKILLS AND LANGUAGE
PROFICIENCY REQUIREMENTS

MASTER ACTIVITIES AND DECISIONS – STEP 1

FIGURE 1

OUTLINE OF FRENCH RULES

Rule No.	Topical Area
1.	Definite Articles
2.	Subject Pronouns
3.	Inversion Questions
4.	The Verb: *Etre*
5.	Indefinite Articles
6.	Cardinal Numbers
7.	Negative Adverb: *Ne* . . . *Pas*
8.	The Verb: *Avoir*
9.	Demonstrative Adjectives
10.	The Preposition: *A*
11.	Yes/No Questions
12.	Verbs Ending in - *ER*
13.	Possessive Adjectives
14.	Indefinite Articles
15.	Numbers to 100
16.	Prepositions: *Chez*/*A*
17.	The Verb: *Aller*
18.	Indefinite Adjectives
19.	Negative Constructions
20.	Large Numbers
21.	Impersonal Verbs
22.	The Verb: *Faire*
23.	Adjectives - Forms
24.	Object Pronouns
25.	Subject Pronouns: *Ce*
26.	Question-Words
27.	The Verbs: *Pouvoir*, *Vouloir*, *Savoir*
28.	Adjectives - Position
29.	Object Pronouns: *Lui*, *Leur*
30.	Object Pronouns: *En*, *Y*
31.	Imperatives
32.	Verbs ending in - *IR*
33.	Comparative and Superlative
34.	Passé Composé (*Avoir*)
35.	Object Pronouns - Order
36.	Adjective - Noun Plural
37.	Verbs ending in - IRE
38.	Comparatives and Superlatives - Irregular
39.	Passé Composé (*Etre*)
40.	Expressions of Quantity
41.	Expressions of Quantity with - *EN*
42.	Verbs Ending in - *IR* (*Partir*)
43.	Infinitive Verb Phrases
44.	Object Pronouns - Infinitive Verb Phrases
45.	Essential Object Pronouns
46.	Expanded Noun Phrases
47.	Verbs like *Venir*

TABLE 1

OUTLINE OF FRENCH RULES (CONT'D)

Rule No.	Topical Area
48.	L'Imparfait
49.	Pronoms Toniques
50.	Negative Expression: Ne . . . Que
51.	Adverbes
52.	Verbes du type Vendre
53.	Le Passé Composé et L'Imparfait
54.	Pronoms Possessifs
55.	Tout, Toute, Tous, Toutes
56.	Autres Adverbes
57.	Verbes du type Ecrire
58.	Verbes du type Mettre
59.	Le Futur
60.	Pronoms Relatifs: Qui, Que, Ce Qui, Ce Que
61.	Pronoms Relatifs: Qui & Que Après Préposition
62.	Pronoms Interrogatifs: Qui, Quoi
63.	Verbes du type Recevoir
64.	Le Conditionnel
65.	Pronoms Interrogatifs: Long Form
66.	Pronoms Relatifs: Dont
67.	Lequel, Laquelle, etc.
68.	Verbes du type Prendre
69.	Verbes Pronominaux
70.	Rien, Personne: Négatif
71.	Pronoms Demonstratifs: Celle, Celui
72.	Le Subjonctif (1)
73.	Verbes du type Craindre
74.	Le Subjonctif: Verbes Impersonnels (2)
75.	Le Plus-que-Parfait et le Conditionnel Passé
76.	Accord du Participe Passé
77.	Le Subjonctif (3)
78.	Verbes du type Ouvrir
79.	Le Subjonctif (4)
80.	Autres Adverbes Négatifs
81.	Aucun, Aucune: Négatif
82.	Le Subjonctif (5)
83.	C'est et Il est
84	Le Subjonctif (6)

TABLE 1 (Cont'd.)

Social Content

The introductory texts Langue et Langage and Parole et Pensée were chosen for social content and phonological content, respectively, to supplement the French Basic Course with material designed to influence not only the content of what the student will say, but also the manner in which he or she will say it. The Langue et Langage text is based on a phenomenological approach to second language acquisition, wherein the social and psycholinguistic aspects of the language are considered important to the type of language with which the student would interact in an atmosphere that is culturally French.

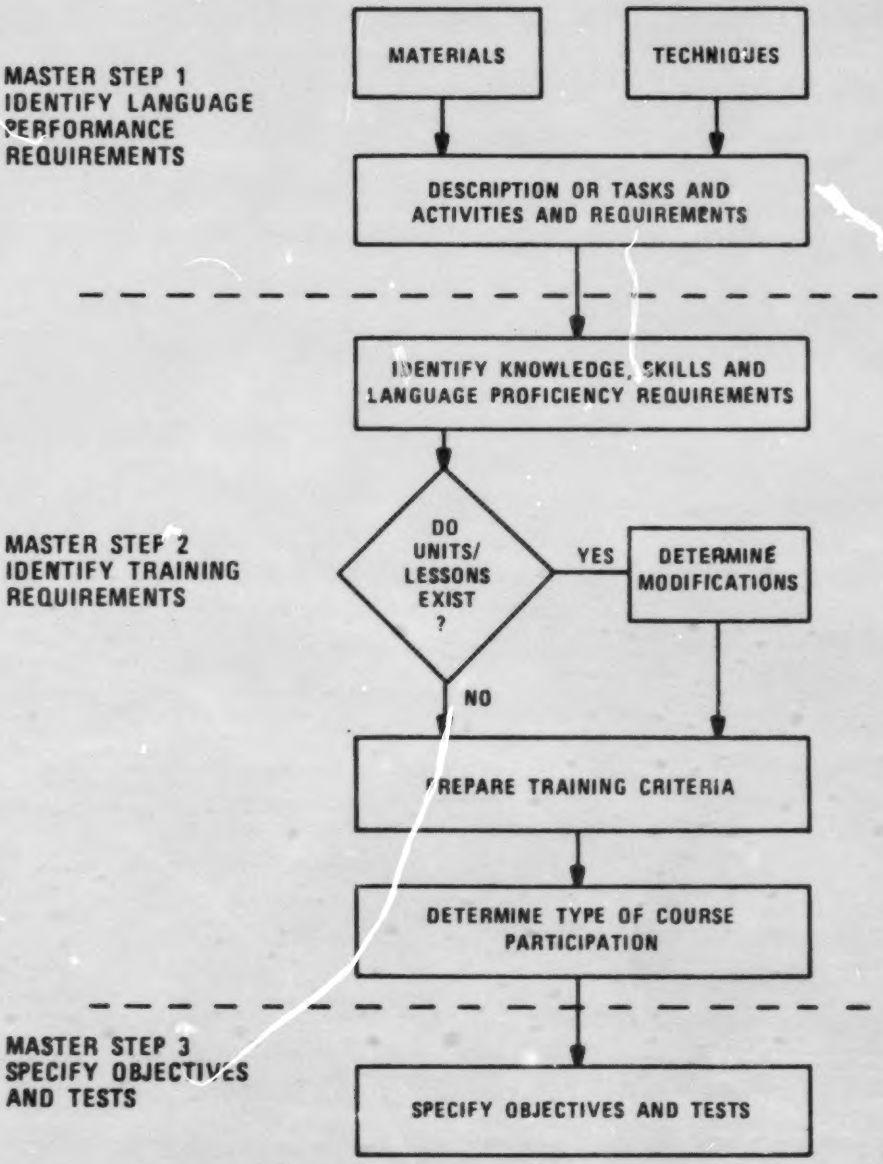
Drill materials in the French Basic Course would usually be treated as socially neutral but would nevertheless be reviewed for cultural and linguistic implications and the "hierarchical rules" cross-referenced to the supplemental texts in a rules matrix. It was conceivable that this matrix could be used for recurring data analysis to identify hierarchical linguistic requirements peculiar to all texts.

Topical Content

For students with exceptional interest or those who expected to go immediately to jobs or areas where they would have to "understand" the foreign language, the diversity of social content would be stressed, and the job or area prospectus would have to be more clearly defined as a topical area. In contrast to the linguistic and cultural dimensions, the topical content would be considered related to the atmosphere in which the student would most likely converse. Because the student's most specialized insterests would probably be the ones most vivid to him or her, rather than those of the systems designer, it would be necessary to develop a usable socio-topical matrix based on the students' career fields and/or special interests. This matrix would be useful for inventorying performance requirements, and for establishing a client need assessment to meet cognitive, affective, or experiential learning (see Appendix A for the socio-topical matrix).

Identify Language Training Requirements

Language training requirements were based on how well the instruction would be developed to meet the needs of the students. The system would not be considered satisfactory until it had established what training would be required to meet the performance requirements (see Figure 2 for Step 2). Training requirements were identified to the "two" level of the Foreign Service Institute (FSI) rating scale for speaking, listening, reading, and writing skills. Course development was designed to proceed in two steps: (1) requirements would be determined based only at the "one" level on the FSI scale; and (2) after the course has been implemented, evaluated, and revised, a foundation would exist for producing the second half of the course to be taught on the "two" level of skill. Therefore, language training requirements, in this study, deals only with the development and evaluation of level


MASTER STEP 1
IDENTIFY LANGUAGE PERFORMANCE REQUIREMENTS
MATERIALS
TECHNIQUES
DESCRIPTION OR TASKS AND ACTIVITIES AND REQUIREMENTS
IDENTIFY KNOWLEDGE, SKILLS AND LANGUAGE PROFICIENCY REQUIREMENTS
MASTER STEP 2
IDENTIFY TRAINING REQUIREMENTS
DO UNITS/ LESSONS EXIST ?
YES
DETERMINE MODIFICATIONS
NO
PREPARE TRAINING CRITERIA
DETERMINE TYPE OF COURSE PARTICIPATION
MASTER STEP 3
SPECIFY OBJECTIVES AND TESTS
SPECIFY OBJECTIVES AND TESTS

MASTER ACTIVITIES AND DECISIONS – STEP 2

FIGURE 2

"one" proficiency. Description of the level "one" rating scale for speaking (S), and listening (L) are outlined in Table 2.

Since precise, quantitative data on the rating scale descriptions do not exist, it was not possible to specify with any accuracy what terminal behavior the students on level "one" should exhibit. Thus, reliance would have to be placed on the hierarchical "rules" as to what linguistic points should be taught in order to enable the student to perform, at least marginally, in the kinds of practical and functional uses of the language expected in everyday situations and/or as described in the *socio-topical matrix*.

Type of Instruction

Instruction focused on the rationale and strategies of a language teaching approach which does not require the language learner to speak until he or she feels comfortable doing so. This concept would be viewed as one alternative approach to second language teaching which might be particularly appropriate for certain students under certain conditions, as determined by assessment of individual needs and motivation. Thus, this simplified model claims that when one comprehends something -- decoding spoken or written symbols into meaning -- one arrives at the meaning by the "rules" of the grammar which in normal human language relate meaning and sound sequences. Theoretically, the only substantial difference between encoding and decoding is the motor skills required for the encoding process, be it writing or speaking. Any

TABLE 2

LEVEL ONE RATING SCALE

Speaking Level 1 (S-1)

The student should be able to satisfy routine travel needs and minimal career-field requirements, ask and answer questions on topics familiar to him or her, and within the scope of this very limited language experience, can understand simple questions and statements related to career field and subject matter areas -- allowing for slowed speech, repetition or paraphrase, speaking vocabulary to be adequate to express the most elementary needs, errors in pronunciation and grammare are frequent, but can be understood by a native of the language.

Language needs vary considerably from individual to individual, however, students completing the S-1 level should be able to order a simple meal, ask for shelter and lodging, ask and give simple directions, and use a self-compiled list of words and definitions related to his or her career field or special interests.

Listening Level 1 (L-1)

The student should have sufficient comprehension to meet survival needs, travel requirements, and understand elementary essentials related to career field or subject matter areas, can understand the language in standard dialect, often delivered at a rate slower than normal, with frequent repetitions about basic needs, such as meals, lodging, transportation, time, and simple directions.

instructional methodology which teaches these "rules" will of necessity have effects on the total language competence. The question is: which methodology teaches these rules most efficiently? With respects to efficiency, it is often the case that the receptive skills -- listening comprehension and reading -- are more needed by the foreign language learner than the productive skills -- speaking and writing. Hence, a person can speak using a very restricted subset of familiar language structures, but he cannot force the other speaker to use only language which he knows.

The rules in Table 1 of this study pose an essential question for the language teacher. These rules are sometimes referred to as pedagogical grammar rules to distinguish them from linguistic grammar rules. They have as their goal, the possibility of causing the student to produce a language form, that is, getting a learner to perform consistently with regard to some aspect of language behavior, whether it is a rule for the use of inversion questions, forming the passe composé, or expressions of quantity. The pedagogical rules used in this study, sequenced in a hierarchical array, were an attempt to train by instilling the student with the knowledge that native speakers unconsciously have (see Appendix B for a comprehensive description and explanation of French Language Rules adapted from the French Basic Course text).

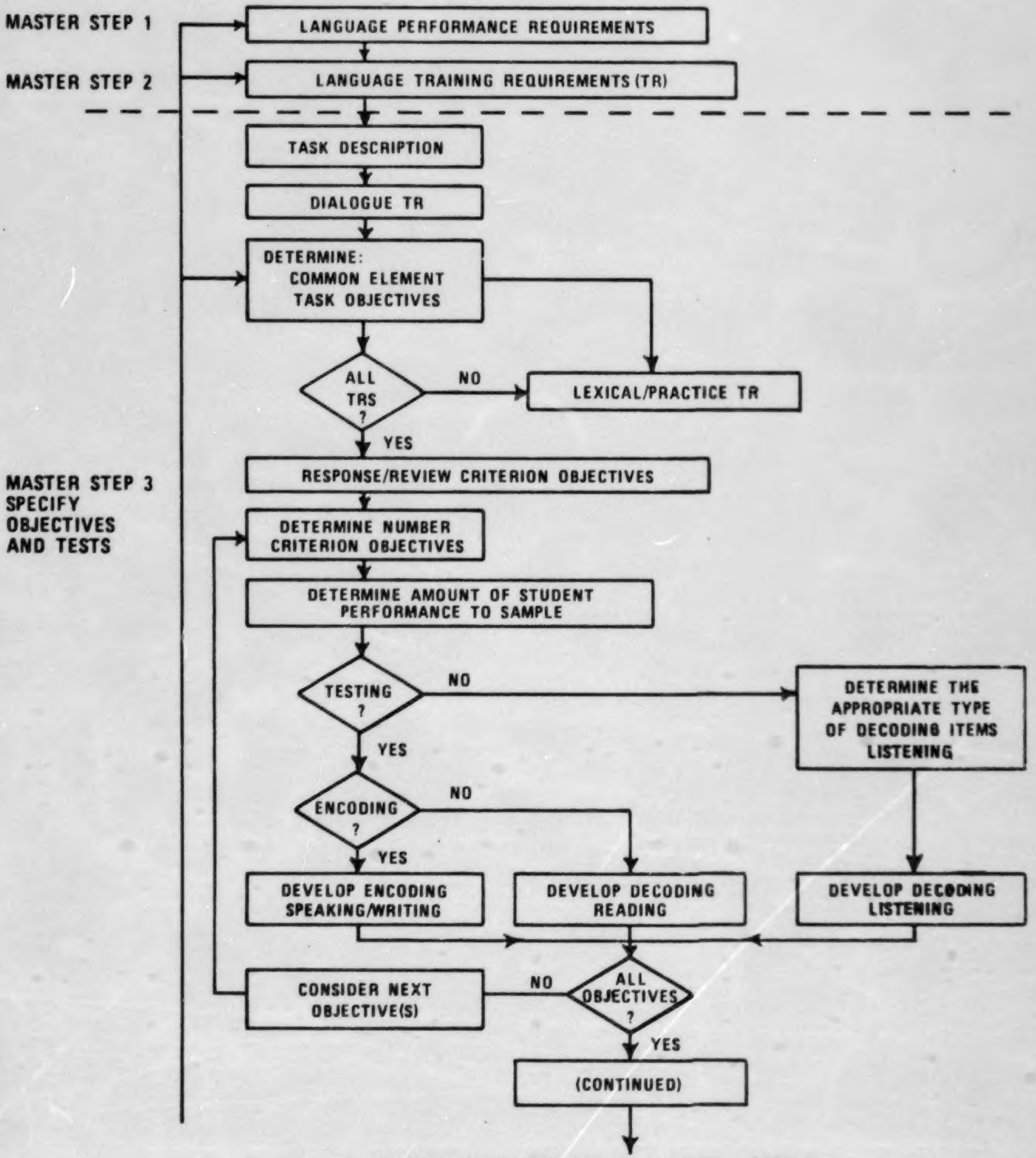
The questions posed by the rules, in respects to training requirements, include: (1) can rules which represent language performance function as rules of language knowledge?

(2) are these rules stored separately and used by the student under specific conditions? It is proposed that these pedagogical rules are useful in language teaching in order to train learners to do things with language in an efficient, valid manner, and to focus on those aspects of the language phenomenon that must be acquired (see Appendix C for the "rules" matrix).

Objectives and Tests

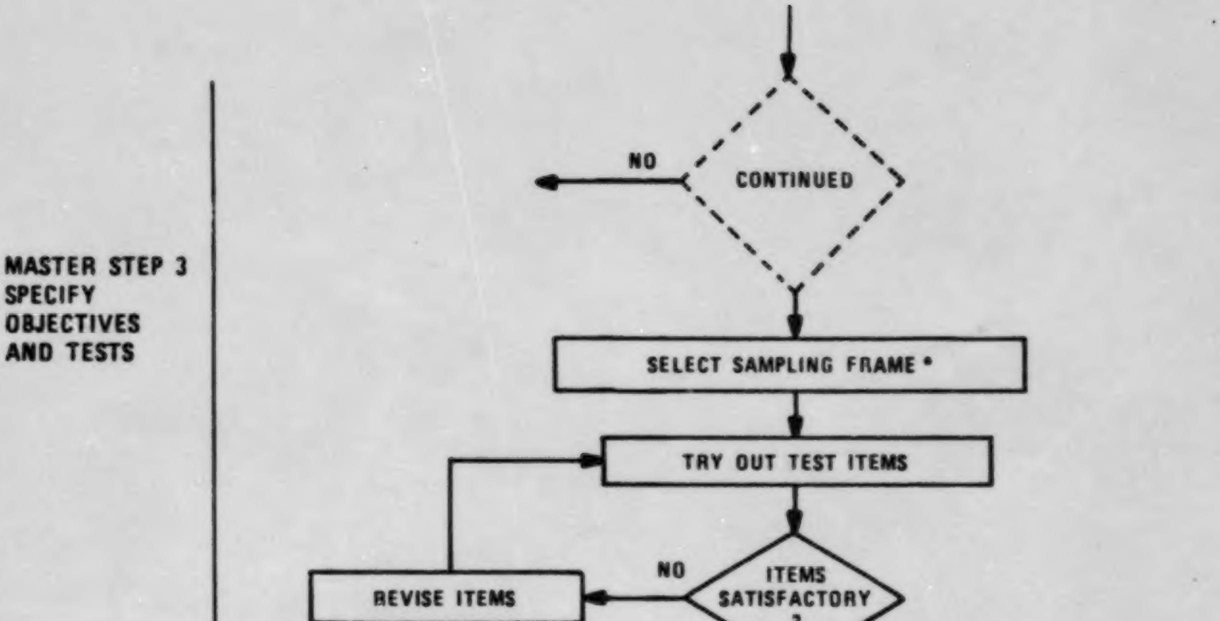
The objectives and tests of the MASTER program placed greater emphasis on the student's attainment of some communicative ability, even at the early levels of instruction (see Figure 3 for Step 3). Testing performance, therefore, had to concentrate on evaluating skill on the basis of more than just classroom participation. Available procedures for the testing of speaking proficiency were unsuitable for use in an introductory program. Methods such as the Foreign Service Institute (FSI) oral interview, and the French Examinations of the College Board (see Appendix D) were considered, but were ruled out from a theoretical standpoint.

The oral interview developed for use with the FSI Basic French Course, by the Department of State, is designed to measure a higher level of efficiency than that achieved by beginning students. By the same token, the French Examinations of the College Board are designed to measure performance at the end of two to four semesters of foreign language instruction at the college level. These testing instruments place more emphasis on the evaluation of pronunciation than on


MASTER STEP 1
MASTER STEP 2
MASTER STEP 3 SPECIFY OBJECTIVES AND TESTS
LANGUAGE PERFORMANCE REQUIREMENTS
LANGUAGE TRAINING REQUIREMENTS (TR)
TASK DESCRIPTION
DIALOGUE TR
DETERMINE: COMMON ELEMENT TASK OBJECTIVES
ALL TRS ?
NO
LEXICAL/PRACTICE TR
YES
RESPONSE/REVIEW CRITERION OBJECTIVES
DETERMINE NUMBER CRITERION OBJECTIVES
DETERMINE AMOUNT OF STUDENT PERFORMANCE TO SAMPLE
TESTING ?
NO
DETERMINE THE APPROPRIATE TYPE OF DECODING ITEMS LISTENING
YES
ENCODING ?
NO
YES
DEVELOP ENCODING SPEAKING/WRITING
DEVELOP DECODING READING
DEVELOP DECODING LISTENING
CONSIDER NEXT OBJECTIVE(S)
NO
ALL OBJECTIVES ?
YES
(CONTINUED)

MASTER ACTIVITIES AND DECISIONS – STEP 3

FIGURE 3


NO
CONTINUED
MASTER STEP 3
SPECIFY
OBJECTIVES
AND TESTS
SELECT SAMPLING FRAME *
TRY OUT TEST ITEMS
NO
REVISE ITEMS
ITEMS SATISFACTORY ?
YES
COMPILE ITEMS INTO CRITERION-REFERENCED TESTS
COURSE CRITERION TEST
DIAGNOSTIC TEST
SURVEY TEST
ADMINISTER SURVEY TEST TO THE SAMPLING FRAME
NO
DELETE OBJECTIVES AND REVISE TRAINING REQMTS.
TRYOUT RESULTS OK ?
* NOTE: SAMPLE OF TARGET POPULATION
YES
MASTER STEP 4
PLAN, DEVELOP, AND
VALIDATE INSTRUCTION
PLAN, DEVELOP AND VALIDATE INSTRUCTION

MASTER ACTIVITIES AND DECISIONS – STEP 3 (CONTINUED)

FIGURE 3 (cont'd.)

communicative ability. The MASTER program, however, views communicative ability as a participatory, two-way skill which demands that the student decode as well as encode messages. Therefore, valid evaluation for the MASTER program required a procedure that could stimulate the use of language in an authentic situational context.

Faced with the lack of a suitable instrument for the evaluation of minimal connumicative ability, yet knowing that it was essential to assess that skill, this study adopted a procedure used at the Indiana University: the French Communicative Ability Test (see Valdman and Moody, 1979). The French Communicative Ability Test (FCAT) was designed to meet four basic requirements: (1) to measure communicative ability, as opposed to pronunciation accuracy or spoken proficiency; (2) simulation of conversational interaction; (3) ease of administration and economy; and (4) reliability of scoring by inexperienced teaching personnel.

The testing procedures consisted of: (1) pictorially cued responses; (2) personal questions; (3) question formulation; and (4) situational responses. However, given the special circumstances of classroom language instruction, the testing program only aimed at the simulation of genuine communicative acts. To provide a valid base for judgments, the evaluation of performance was measured over three communicative scales: (1) appropriateness; (2) well-formedness; and (3) pronunciation accuracy and fluency. The scoring for these scales is described in Table 3. In addition to semantic appropriateness, grammatical well-formedness, and pronunciation accuracy and fluency, responses were also judged on the basis of amount of information communicated. For each situation, one point was awarded for the inclusion of information elements. Thus, responses evaluated on the pre-determined scale of 0-3 were elevated to 4 when informational elements augmented the student's response during performance evaluation.

The modified version of the Indiana University French Communications Test had five favorable characteristics for testing performance in the MASTER program: (1) practicality; (2) validity; (3) reliability; (4) reliability of the test; and (5) reliability of scoring. Designed to be administered to large groups of students, the FCAT test was relatively easier to administer to the small group used in this study. The test itself was programmed to last only 15 minutes, requiring on the average 20 minutes to administer, which included set up, play-back, and scoring.

Despite inherent shortcomings in scoring reliability, due to simulated rather than actual conversational settings, this method of testing seemed to be a generally valid, reliable and, without doubt, practical measure of minimal communicative ability in French. Because it is standardized, it was well suited for administration to the small group, and opportunities for oral review were possible despite the use of evaluators with less experience and training in testing procedures. As compared to other methods of testing (FSI, French Examinations

FCAT EVALUATION SCALES

Semantic Appropriateness

Score		Performance/Communicative Ability
0	-	Totally inappropriate response, or no response.
1	-	Response that is inappropriate in some major way, but demonstrates at least partial comprehension of the situation.
2	-	Use of inappropriate person, number, or tense; or response that is inappropriate in some minor way.
3	-	Totally appropriate response.
4	-	Response augmented during performance evaluation.

TABLE 3

FCAT EVALUATION SCALES

Grammatical Well-Formedness

Score		Performance/Communicative Ability
0	-	Very deviant error, not readily interpretable by native speaker, or no response.
1	-	Telegraphic response, somewhat deviant, possibly interpretable by native speaker.
2	-	Somewhat deviant response, containing one grammatical error, or two lexical errors.
3	-	Perfect or nearly perfect response, grammatically sound, containing no more than one lexical error.
4	-	Response augmented during performance evaluation.

TABLE 3 (cont'd.)

FCAT EVALUATION SCALES

Pronunciation Accuracy and Fluency

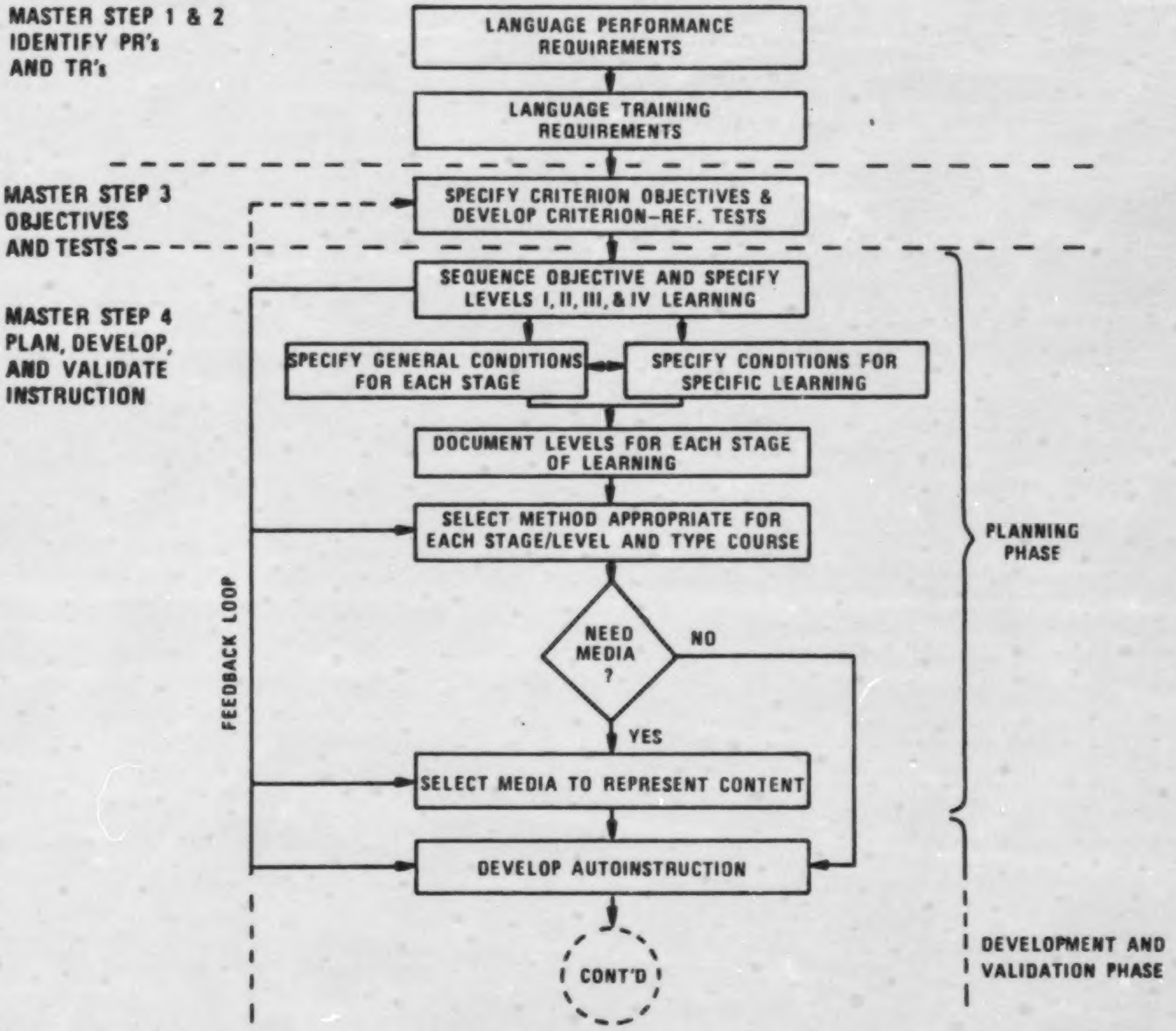
Score		Performance/Communicative Ability
0	-	Hesitant response; or response containing two or more phonemic errors or gross phonetic inaccuracies.
1	-	No hesitation; or response containing no more than one phonemic error or gross phonetic inaccuracy.
2	-	No hesitation; absense of errors at the phonemic level, and phonetic inaccuracies typical of acceptable but anglicized French.
3	-	Perfect response, exhibiting almost accentless French.
4	-	Response augmented during performance evaluation.

TABLE 3 (cont'd.)

of the College Board) the FCAT seemed a more valid measure of communicative ability for beginning students with less than one year of instruction. The structure of the FCAT rating scales offered a means of measuring the minimal level of communicative ability of students completing one semester of French, by providing concrete samples of course-final performance. The test also served as a training tool for the instructor, by defining a point of reference against which he could measure student progress during the course, and by providing a representative sample of students' range of communicative ability over a period of time. Thus, the testing procedures served as a guide for the planning of future classroom activities that would lead to a pre-determined level of communicative ability, and would also define for the students the level of accomplishment expected of them.

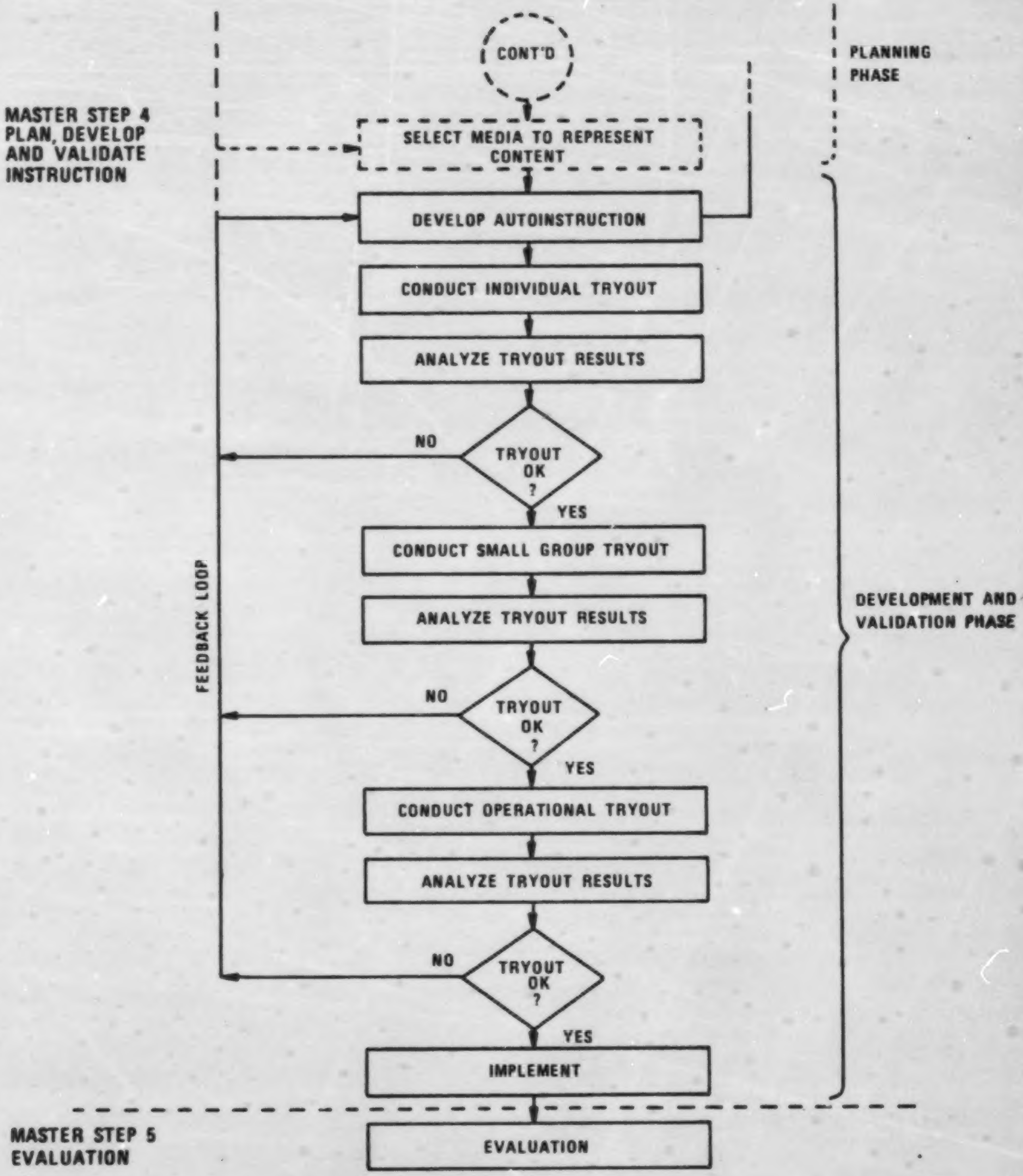
Planning

The Plan of Instruction was developed to provide a set of learning experiences that would create an optimum standard of performance. Hence, planning required a systematic specification of instructional conditions, materials, techniques, methods, media, and adaptive approaches to obtain the course objectives (see Figure 4 for Step 4). The shift in focus from teaching to learning, advocated by this study, implies many changes in the instructional process. In the learning-teaching process, tasks were viewed as multidimensional, incorporating the role of the foreign language teacher and


MASTER STEP 1 & 2
IDENTIFY PR's
AND TR's
LANGUAGE PERFORMANCE REQUIREMENTS
LANGUAGE TRAINING REQUIREMENTS
MASTER STEP 3
OBJECTIVES
AND TESTS
SPECIFY CRITERION OBJECTIVES & DEVELOP CRITERION-REF. TESTS
MASTER STEP 4
PLAN, DEVELOP,
AND VALIDATE
INSTRUCTION
SEQUENCE OBJECTIVE AND SPECIFY LEVELS I, II, III, & IV LEARNING
SPECIFY GENERAL CONDITIONS FOR EACH STAGE
SPECIFY CONDITIONS FOR SPECIFIC LEARNING
DOCUMENT LEVELS FOR EACH STAGE OF LEARNING
SELECT METHOD APPROPRIATE FOR EACH STAGE/LEVEL AND TYPE COURSE
FEEDBACK LOOP
NEED MEDIA ?
NO
YES
SELECT MEDIA TO REPRESENT CONTENT
DEVELOP AUTOINSTRUCTION
CONT'D
PLANNING PHASE
DEVELOPMENT AND VALIDATION PHASE

MASTER ACTIVITIES AND DECISIONS – STEP 4

FIGURE 4


CONT'D
PLANNING PHASE
MASTER STEP 4
PLAN, DEVELOP
AND VALIDATE
INSTRUCTION
SELECT MEDIA TO REPRESENT CONTENT
DEVELOP AUTOINSTRUCTION
CONDUCT INDIVIDUAL TRYOUT
ANALYZE TRYOUT RESULTS
NO
TRYOUT OK ?
YES
CONDUCT SMALL GROUP TRYOUT
ANALYZE TRYOUT RESULTS
FEEDBACK LOOP
DEVELOPMENT AND VALIDATION PHASE
NO
TRYOUT OK ?
YES
CONDUCT OPERATIONAL TRYOUT
ANALYZE TRYOUT RESULTS
NO
TRYOUT OK ?
YES
IMPLEMENT
MASTER STEP 5
EVALUATION
EVALUATION

MASTER ACTIVITIES AND DECISIONS – STEP 4 (CONTINUED)

FIGURE 4 (cont'd.)

researcher. This shift in focus from teacher to learner involved an accompanying shift in instructional materials, techniques and methodology.

Instructional Materials

Basic Sentences

Instructional materials were divided into learning capsules. Each capsule or unit presented several learning experiences: (1) a "dialogue" of basic sentences which provided a source for subsequent lexical drills, and (2) socio-topical content in pronunciation and grammar rules, substitution drills, and response drills (see Table 4 for a sample dialogue).

Vocabulary Drills

The vocabulary drill and lists were augmented by the instructor and students from socio-topical matrixes to develop meaningful practice in the use of new vocabulary items related to career fields and liberal arts areas, and also to allow for manipulation of sentence elements whose particular form and arrangement depends upon their association with the vocabulary item (see Table 5 for sample vocabulary drill).

The incorporation of career field subject matter in a system designed to teach a foreign language was based on the proposition that people learn features of a language best if they use these features for their own practical learning, rather than merely mimicking, memorizing and manipulating symbols. If the student's work was confined to linguistic

BASIC SENTENCES - DIALOGUE

Dans la rue	On the street
dans	in, on
rue (f)	street

Mr. Lelong and Mrs. Durand are going to have lunch together. En route, Mrs. Durand notices Janine Courtois, the daughter of friends.

MME DURAND:

Tiens, voilà Madamoiselle	Well, there's Miss Courtois.
tiens	(exclamation indicating surprise)
voilà	here is, here are
Madamoiselle	Miss
Bonjour, Janine.	Hello, Janine

MLLE COURTOIS:

Bonjour, Madame. Comment allez-vous?	Hello, Mrs. Durand. How are you?
Madame	Madam
comment	how
aller (allez-vous)	to go (do you go)
vous	you

MME DURAND:

Très bien, merci.	Fine, thanks.
très	very
bien	well
merci	thank you
Permettez-moi de vous présenter Monsieur Lelong.	May I introduce Mr. Lelong to you.
permettre de	to permit
moi	me
présenter	to present
Monsieur	Mister

TABLE 4

M. LELONG:

Je suis heureux de faire votre connaissance, Mademoiselle.	I'm happy to meet you, Miss Courtois.
être (je suis)	to be (I am)
heureux	happy
heureux de	happy to
faire	to make, to do
votre	your
connaissance (f)	acquaintance

MLLE COURTOIS:

Bonjour, Monsieur.	How do you do, Mr. Lelong.

MME DURAND:

Avez-vous des nouvelles de votre frère?	Do you have news from your brother?

MLLE COURTOIS:

Oui, merci Il est à Lyon maintenant.	Yes, thank you. He's in Lyon now.
oui	yes
être (il est)	to be (he is)
à	in
maintenant	now

MME DURAND:

Vos parents sont-ils toujour en vacances?	Are your parents still on vacation?
vos	your
parents (m)	parents
être (sont-ils)	to be (are they)
toujours	always, still
en	in, on
vacances (f)	vacation

MLLE COURTOIS:

Oui et ma soeur est avex eux.	Yes, and my sister is with them.

TABLE 4 (cont'd.)

et	and
ma	my
soeur (f)	sister
avec	with
eux	them
MME DURAND:	
Transmettez-leur mon meilleur souvenir.	Send them my best regards.
transmettre	to transmit
leur	them
mon	my
meilleur	best
souvenir (m)	souvenir
MLLE COURTOIS:	
Je n'y manquerai pas.	I certainly will.
ne . . . pas	not
manquer a	to fail to
Excusez-moi, je suis pressée.	Excuse me, I'm in a hurry.
excuser	to excuse
pressée	in a hurry
A bientôt, j'espere.	See you soon, I hope.
bientôt	soon
espere (j'espere)	to hope (I hope)
MME DURAND:	
Au revoir, Janine.	Good-bye, Janine.
MLLE COURTOIS:	
Au revoir, Monsieur.	Good-bye, Mr. Lelong.
M. LELONG:	
Au revoir, Mademoiselle.	Good-bye, Miss Courtois.
(Madame Durand et Monsieur Lelong)	(Mrs. Durand and Mr. Lelong).
MME DURAND:	
Quelle heure est-il?	What time is it?

TABLE 4 (cont'd.)

quelle	which
heure (f)	hour
il	it
M. LELONG:	
Il est une heure.	It's one o'clock.
une	one, a, an
MME DURAND:	
Ou allons-nous déjeuner?	Where are we going to have lunch?
ou	where
aller (allons-nous)	to go (do we go)
déjeuner	to have lunch
M. LELONG:	
Voulez-vous aller au Café de Paris?	Do you want to go to the Cafe de Paris?
MME DURAND:	
Oui, c'est un très bon restaurant.	Yes, it's a very good restaurant.
c'est	it is, that is
bon	good
restaurant (m)	restaurant
M. LELONG:	
Et il est près d'ici.	And it's near by.
près (de)	near, close
ici	here

TABLE 4 (cont'd.)

VOCABULARY DRILL

1.	Mon frère va bien.	My brother feels fine.
2.	Mon père va bien.	My father feels fine.
3.	Mon fils va bien.	My son feels fine.
4.	Mon mari va bien.	My husband feels fine.
5.	Mon enfant va bien.	My child feels fine.
6.	Mon ami va bien.	My friend feels fine.
7.	Il va bien.	He feels fine.

1.	Ma soeur va bien.	My sister feels fine.
2.	Ma mère va bien.	My mother feels fine.
3.	Ma fille va bien.	My daughter feels fine.
4.	Ma femme va bien.	My wife feels fine.
5.	Mon amie va bien.	My friend feels fine.
6.	Elle va bien.	She feels fine.

1.	Va-t-elle au café?	Is she going to the cafe?
2.	Va-t-elle à Paris?	Is she going to Paris?
3.	Va-t-elle au restaurant?	Is she going to the restaurant?
4.	Va-t-elle à Lyon?	Is she going to Lyon?
5.	Va-t-elle au Café de Paris?	Is she going to the Cafe de Paris?

1.	Va-t-il en classe?	Is he going to class?
2.	Va-t-il au café?	Is he going to the cafe?
3.	Va-t-il en vacances?	Is he going on vacation?
4.	Va-t-il au restaurant?	Is he going to the restaurant?

1.	Ou allez-vous?	Where are you going?
2.	Ou allons-vous?	Where are we going?
3.	Ou va-t-il?	Where is he going?
4.	Ou va-t-elle?	Where is she going?

1.	Quand allez-vous à Paris?	When are you going to Paris?
2.	Quand allons-vous à Lyon?	When are we going to Lyon?
3.	Quand allez-vous au café?	When are you going to the cafe?
4.	Quand allons-vous au restaurant?	When are we going to the restaurant?

1.	Pourquoi va-t-elle à Lyon?	Why is she going to Lyon?
2.	Quand va-t-elle a Lyon?	When is she going to Lyon?
3.	Avec qui va-t-elle à Lyon?	With whom is she going to Lyon?
4.	A quelle heure va-t-elle à Lyon?	At what time is she going to Lyon?

TABLE 5

structures and training, drills, unrelated to real life concerns, then these would not likely be considered during conversation in a real life or simulated situation.

Substitution Drills

The substitution drill enabled the manipulation of forms by substituting specific items in fixed sentence frames. The vocabulary used in this drill had already been introduced in the basic sentences; consequently, no English equivalent was given as part of the text (see Table 6 for a sample of substitution drill).

Variation Drills

The variation drill was designed to manipulate larger syntactic patterns than the substitution drill. In each variation group, an underscored template sentence served as a guide. Additional sentences incorporated the same syntactical pattern but varied the word items. English equivalents served as cues for recall of the variant in the foreign language (see Table 7 for sample of variation drill).

Translation Drills

The translation drill presented the basic sentences in the form of a narrative, thus enabling review of the basic sentences and practice in the translation of descriptive narrative (see Table 8 for sample of translation drill).

Response Drills

The response drill provided question and answer training

SUBSTITUTION DRILL

This drill is made up of a number of model sentences. Some of the words in each sentence are underscored. The drill consists in substituting these model sentences, one by one, for the pattern sentence that begins each drill segment.

The instructor says the pattern sentence out loud, and the class repeats after him. The first student makes the first substitution, the next student the second, and so on. Repeat until all students have had a chance to make each substitution at least once, then proceed to the next lexical segment.

This drill may be done with books closed. The instructor then gives the student (cues) the item to be substituted.

Keep things moving along. Maintain a lively pace. If one student gets stuck, the next one takes over after three or four seconds.

LEXICAL A-1

1. Je suis heureux de faire votre connaissance.
2. Il est heureux de faire votre connaissance.
3. Mon frère est heureux de faire votre connaissance.
4. Mon père est heureux de faire votre connaissance.
5. Ils sont heureux de faire votre connaissance.
6. Mon frère est heureux de faire votre connaissance.
7. Mon ami est heureux de faire votre connaissance.
8. Je suis heureux de faire votre connaissance.

LEXICAL A-2

1. Je suis heureux de faire votre connaissance.
2. Je suis heureux de parler francais.
3. Je suis heureux de déjeuner avec vous.
4. Je suis heureux de parler anglais.
5. Je suis heureux de transmettre les nouvelles.
6. Je suis heureux de présenter mon ami.
7. Je suis heureux de déjeuner au restaurant.
8. Je suis heureux de faire votre connaissance.

TABLE 6

VARIATION DRILL

This section is made up of several groups of sentences. Each group is headed by an underscored pattern sentence. The instructor reads the pattern sentence out loud, and the class repeats after him. The first student then gives the French version of the first variation sentence under the pattern sentence. The next student takes the second sentence, and so on.

After sufficient practice, the student MUST COVER THE RIGHT-HAND SIDE OF THE PAGE BEFORE RESPONDING IN ENGLISH: OR, COVER THE LEFT-HAND SIDE OF THE PAGE BEFORE RESPONDING IN FRENCH.

English versions must be read silently, and the French version must be given without stopping, with the proper pronunciation, including intonation. If the student has to "translate" word by word, he or she needs more practice with the Basic Sentences.

LEXICAL A-17

1.	Je suis heureux de faire votre connaissance.	I am happy to make your acquaintance.
2.	Il est heureux d'être ici.	He is happy to be here.
3.	Votre fils est heureux d'être ici.	Your son is happy to be here.
4.	Votre fils est heureux d'aller à Lyon.	Your son is happy to go to Lyon.
5.	Nous sommes heureux d'aller à Lyon.	We are happy to go to Lyon.
6.	Nous sommes heureux d'aller à Paris.	We are happy to go to Paris.
7.	Je suis heureux d'aller à Paris.	I am happy to go to Paris.
8.	Je suis heureux de faire votre connaissance.	I am happy to make your acquaintance.

TABLE 7

TRANSLATION DRILL

Students cover the left-hand side of the page and take turns giving the French version of the sentences in the English column. The instructor must insist that each student give his version without hesitation. Go over the drill several times, until each student has had an opportunity to give all sentences.

IF STUDENTS ARE NOT ABLE TO DO THIS DRILL CONFIDENTLY, THEY NEED MORE PREPARATION.

Learning Drill A-1

1.	Allons-nous au Café du Paris?	Are we going to the Cafe du Paris?
2.	Allons-nous à Lyon?	Are we going to Lyon?
3.	Est-il à Lyon?	Is he in Lyon?
4.	Est-il au restaurant?	Is he at the restaurant?
5.	Sont-ils au restaurant?	Are they at the restaurant?
6.	Sont-ils à Paris?	Are they in Paris?
7.	Allez-vous à Paris?	Are you going to Paris?
8.	Allez-vous au Café du Paris?	Are you going to the Cafe du Paris?
9.	Allons-nous au Café de Paris?	Are we going to the Cafe du Paris?

Learning Drill A-2

1.	Vos parents sont-ils en vacances?	Are your parents on vacation?
2.	Les enfants sont-ils en vacances?	Are the children on vacation?
3.	Les enfants sont-ils à Lyon?	Are the children in Lyon?
4.	Votre ami est-il à Lyon?	Is your friend in Lyon?
5.	Votre ami est-il pressé?	Is your friend in a hurry?
6.	Mme Durand est-elle pressé?	Is Mrs. Durand in a hurry?
7.	Mme Durand est-elle à Paris?	Is Mrs. Durand in Paris?
8.	Vos parents sont-ils à Paris?	Are your parents in Paris?
9.	Vos parents sont-ils en vacances?	Are your parents on vacation?

TABLE 8

keyed to the situations introduced by the basic sentences. This type of conversation practice bridged the gap between practice drills and uninhibited student response, as it encouraged the use of the student's imagination (see Table 9 for sample of response drill).

Development and Validation

The development process led to feedback, confirmation, and revision of the system. Feedback was obtained by trying out the program on a specific student sample, and results of the sample evaluation provided information for specific revision requirements (see Figure 4 for this development and validation cycle). During the development sequence, the sampling frame performed the hierarchy of learning tasks necessary to validate the system. These tasks formed the basis for modelling the entire training program, including peer training, and directed independent study.

In the validation stage, the sample selection used for the first tryout came from the upper 25 percent of the sampling frame in aptitude and background. The reasons for choosing students from this group were: (1) intelligent students often can point out and analyze weak spots in instruction; (2) if the better students cannot learn from the material, the slower students might have even more difficulty; (3) if the average students are used for initial tryouts and they perform well, there is no way to tell if the material is too easy, if there are too many tedious steps, or if there is too much practice;

RESPONSE DRILL

Students should prepare this drill at home. The questions are generally directed toward the situation or situations presented in the Basic Sentences. The answers suggested are obviously not the only possible answers to these questions, and the student should feel free to vary them or to replace them by his own formulations ad libitum, within the limitations of structure and vocabulary covered.

PRACTICE A-6

1. Dites-mois que votre soeur est en vacances.
2. Dites à M. X qu-il va déjeuner au restaurant.
3. Dites à M. X que Mlle Courtois est pressé.
4. Dites-moi que votre soeur est avec votre femme.
5. Dites-moi que M. Y va déjeuner avec elles.
6. Dites-moi que vous êtes presse.
7. Dites-moi que M. X va déjeuner au restaurant.
8. Dites à M. X qu'il est en retard.
9. Demandez-mois de répéter.
10. Demandez à M. X de fermer la porte.

TABLE 9

(4) it is easier to work down from a known point of difficulty than to work up from an unknown point of difficulty; and (5) it is simpler to delete material to make a lesson easier than to add material to make it more difficult.

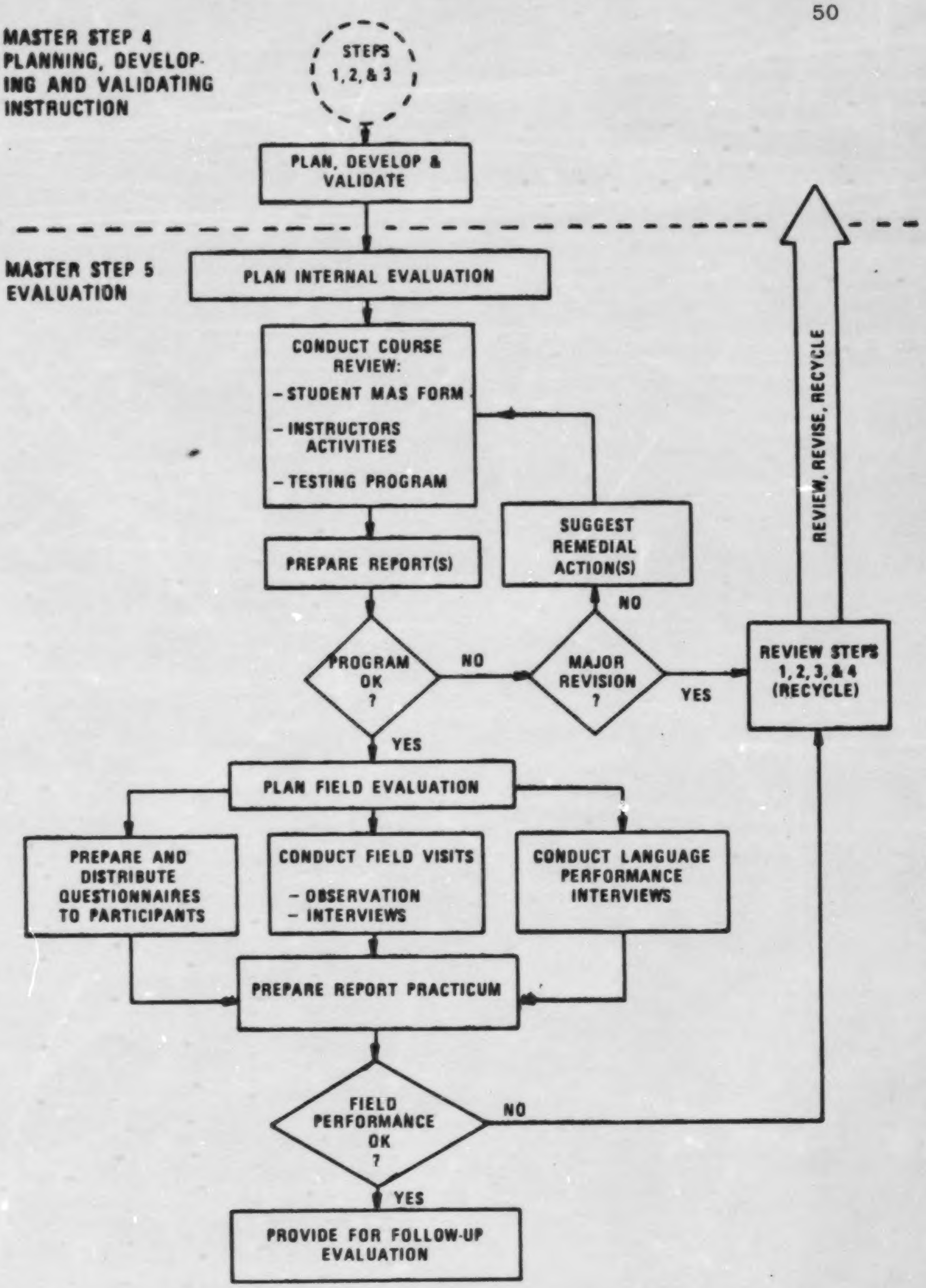
Implementation

In general, the greater the acceptance of the desirability of student-centered learning, the more effective the implementation of the MASTER Program. In the initial stages, a pre-assessment survey was administered to compile data which would develop instruction to allow for individual needs, to provide for individual and multiple interests, to adapt the learning rate to the individual's ability, and to provide for interaction between student and teacher as well as between student and peers (see Appendix E for a sample of the pre-assessment survey).

Conduct and Evaluation

Conducting the instructional system included instructor training, scheduling, and actual implementation of the program. As manager and course administrator, the study ensured that materials, equipment, media, and other items were readily accessible to the students, and that each student was progressing within the preplanned scope of teacher-learning activities (see Figure 5 for Step 5).

Evaluation of the instructional system consisted of useful ideas conceived and discussed by instructor and students after each training period. Such ideas included improvement


MASTER STEP 4
PLANNING, DEVELOPING AND VALIDATING INSTRUCTION
STEPS 1, 2, & 3
PLAN, DEVELOP & VALIDATE
MASTER STEP 5
EVALUATION
PLAN INTERNAL EVALUATION
CONDUCT COURSE REVIEW:
– STUDENT MAS FORM
– INSTRUCTORS ACTIVITIES
– TESTING PROGRAM
PREPARE REPORT(S)
SUGGEST REMEDIAL ACTION(S)
NO
PROGRAM OK ?
NO
MAJOR REVISION ?
YES
REVIEW STEPS 1, 2, 3, & 4 (RECYCLE)
REVIEW, REVISE, RECYCLE
YES
PLAN FIELD EVALUATION
PREPARE AND DISTRIBUTE QUESTIONNAIRES TO PARTICIPANTS
CONDUCT FIELD VISITS
– OBSERVATION
– INTERVIEWS
CONDUCT LANGUAGE PERFORMANCE INTERVIEWS
PREPARE REPORT PRACTICUM
FIELD PERFORMANCE OK ?
NO
YES
PROVIDE FOR FOLLOW-UP EVALUATION

MASTER ACTIVITIES AND DECISIONS – STEP 5

FIGURE 5

of instructional conditions and resources, methods of presentation, and quality control procedures to ensure continued system validation and effectiveness. The procedure designed to determine how well the program performed with regards to pre-established guidelines as classified by this study was a "focused" evaluation. The study considered it focused because the students identified needs that must be met or questions that demanded answers.

Although beyond the scope of this present study, the conduct and evaluation of the instructional system could be used to test certain hypotheses where the critical concern would be the internal validity of the system itself, or the external validity of the system as it operates within the framework of the larger institutional system.

It has been recognized that evaluation within the MASTER Program will require many and varied testing techniques in addition to the FCAT method, or, any method devised to test communicative ability. The mastery of a foreign language, even at the introductory level, is too complex a matter for evaluation to be based only on objective techniques, both objective and subjective assessment must be employed. This study suggests the use of evaluation tools, ranging from self-assessment instruments to standardized test for defined objectives. Accordingly, the French Examinations of the College Board, Clep Tests, FCAT method, and self-assessment techniques may all be needed in order to achieve the multi-faceted learning system adapted to individual needs and objectives which is the aim of the MASTER Program.

The importance of involving the learner in the task of evaluation is emphasized in this study, to give the student a greater responsibility for determining the pace of his own learning. Thus, it is essential to find not only an appropriate instrument to evaluate the communicative ability of the learner, but also a self-assessment approach to help the student develop a self-critical awareness of his acquisition of knowledge. It also seems clear that self-assessment of the results of learning must become an increasingly important feature of the system and that it will be necessary to make provision for the development of evaluative techniques which can be put in the learner's hands. The most improtant function of such self-assessment tools ought to be to provide the learner continuous feedback on what he has learned, and to enable him to assess his total achievement at the end of the course or course unit.

Thus, the aim of this study is to outline possible methods of testing communicative ability and guided self-assessment in second language acquisition, to suggest approaches that might be taken in order to further develop methods judged suitable for use within the MASTER Program. It would be noted, however, that self-assessment is a new field in languages testing and consequently there is little accumulated knowledge and experience to draw from for the purposes of this study. Therefore, as opposed to testing "communicative ability," the sections of this practicum that deal with self-assessment techniques are necessarily of a tentative and provisional nature. It is intended to suggest procedures and methodology along which further research and development work might yield fruitful outcomes, rather than to recommend detailed and finalized procedures for immediate use by others.

The self-assessment forms and procedures developed for this study, were based on the hypothesis that most students have a certain capacity for determining their own language skills and knowledge. A model of a standard self-assessment form is illustrated in Figure 6 , which consists of a 10-point scale ranging from complete proficiency in skill or knowledge in question down to no proficiency whatsoever. The text of the test should be in the learner's native tongue, not in the target language. With the use of this non-defined, 10-point scale, one can also narrate concrete situations of which require mastery of a particular language skill, i.e., listening comprehension, speaking, reading, and writing.

Sample questionnaires for self-assessment at Level 1, in the learner's native language, were prepared based on as little specialized factual knowledge as possible, so as to ensure that the response would not unduly test the learner's "worldly knowledge," but rather his or her linguistic competence. In addition, the learner's assessment of his own language ability can be better facilitated if he is a member of a group in which he can interact. Authentic language situations generally provide the most valid opportunities for self-evaluation.

In addition, the practical application of both the objective method of testing and the subjective, self-assessment

STANDARD SELF-ASSESSMENT FORM*

Example of Self-Assessment Form for (Listening Comprehension)

Put a cross in the place which corresponds to your proficiency level:

I understand practically everything that is said to me in French ________ 10

________ 9

________ 8

________ 7

________ 6

________ 5

________ 4

________ 3

________ 2

________ 1

I do not understand spoken French at all ________ 0

*Adapted from Oskarsson, 1980.

FIGURE 6

approach, could also enable the teacher to determine whether there is any correspondence between his judgment of his learner's proficiency and the learner's own judgment based on self-assessment. This interaction analysis can be used to help the teacher gain an understanding of the influence of affective factors on the teaching-learning situation, and also helps the trainee gain a greater awareness of the effect of teacher behavior on students. It is proposed that this awareness sensitizes the teacher to such behaviors as accepting, valueing and personalizing students' responses, and thus enables him to function more effectively in a student-centered classroom.

Course evaluation was continuous during all developmental stages and involved both student and teacher input. However, a final questionnaire was administered to the students to obtain an overall reaction to the MASTER Program (see Appendix F for a sample of the Course Questionnaire).

Definition of Terms

Term	Definition
Achievement Test	A test for measuring an individual's progress in the mastery of subject to be learned.
Adaptive Technique	Any of several techniques used in programming to accommodate individual differences. It may permit the student to bypass material he already knows or may provide additional instruction as needed. In programming language, this also means bypassing or branching.
Adjunct Programming	A programming method in which the instructional program supplements a textbook, technical publication, or other source of information. The program is intended to instruct the student in the use of the material it supplements or to expand upon the content of the material it supplements.
Adjustment	Refers to adjustment (tryout and revision) of the system. Process whereby the system is changed to improve its output and/or to make it more efficient and economical.
Advance Organizer	An introductory statement that describes the general concepts and materials to be covered during instruction. This provides the student with a list of the objectives which describe what he or she will be able to do at the end of instruction.
Algorithm	An orderly procedure or exact prescription for solving a problem. In an algorithm, the physical layout of the presentation shows the relationship between input data, rules, and outcomes. Algorithms replace continuous prose as an instrument for communicating complex rules and designs.
Analysis of Learning Task	Process by which the designer of an instructional system identifies whatever

	the student has to learn in order to be able to perform the task as described in the criterion objective.
Association	The connection made between an input (stimulus) and an action (response). The learner associates a response with a specific input only. The response may be vocal, sub-vocal, written, or motor.
Audio-Visual Media	Those things which communicate information through human sight or sound sensors; for example, 16mm motion picture films, tape recordings, charts, maps, objects and like items.
Behavior	Any activity, overt or covert, capable of being measured.
Behavioral Objective	A statement that specifies precisely what behavior is to be exhibited, the conditions under which behavior will be accomplished, and the minimum standard of acceptable performance.
Branch	In programmed instruction, a point of choice at which students are sent to alternative items depending on their responses to the particular item.
Bypassing	In programmed instruction, a technique which permits a student to skip certain portions of the materials because of prior knowledge. A criterion item may be inserted in a linear program, and if the student passes it, he is sent forward several items (bypassing); if he fails the criterion item, he takes an intervening sequence of review or remedial items.
Career Education	A concept which includes the development of faculty expertise in and commitment to work-education interactions; curriculum development to reflect career interests and needs; involvement of the business-labor-industry-governmental communities in the learning process; and opportunities for the integration of the worlds of learning and work.

Chaining	The linking together of a series of discriminable responses in a particular order. The completion of each response provides the stimulus for the next response. May involve chains of verbal responses or chains or motor responses.
Component Analysis	A process employed by the designer of a system in order to identify alternative human and material means that have the potential to carry out specific functions required for the attainment of system objectives.
Components	Parts which comprise a system and which are selected to accomplish specific functions required for the attainment of the objectives of the system. In education, we have human components such as the learner, teacher, counselor; media such as print and audio-visual equipment; facilities such as classrooms; and other material and financial means.
Confirmation	Notification to the student of the correctness of his response immediately after his response. (See also feedback.)
Constraints	Limiting or restraining conditions or factors, such as policy considerations, time limitations, environmental factors, and budgetary and other resource limitations.
Constructed Response	An answer requiring recall or completion as opposed to recognition, e.g., writing a sentence, paragraph, or essay.
Course Control Documents	Specialized publications used to control the quality of instruction. Specialty training standard, course training standard, plan of instruction, syllabus, and course charts are considered course control documents.
Courseware	The technical data, textual materials, and audiotapes, slides, movies, and other audiovisual instructional materials.

Criterion Objective	This objective specifies precisely what behavior is to be exhibited, the conditions under which behavior will be accomplished to accurately satisfy a performance requirement.
Criterion-Referenced Test	Test given to determine if behavior as reflected in criterion objectives has been acquired. May involve multiple-choice items, fill-in items, essays, or actual performance of a task. If given immediately after learning sequences, it is a test of acquisition; if given considerably later, it is a retention test; if it requires performance not specifically learned during instruction, it is a transfer test.
Cue	A stimulus added to the terminal stimulus to make the correct response more likely while the student is learning. It may be pictorial or verbal.
Discrimination	Making different responses to the different stimuli. A discrimination requires a person to determine the differences among inputs and to respond differently to each.
Distributed Practice	During learning, the process of spacing numerous, relatively short, practice sessions throughout the learning period.
Enrichment	Supplementary material which aids the student in progressing through the course but is not considered crucial to learning.
Entering Behavior	The skills and knowledges a trainee has when he or she enters a course of instruction. Includes information about school performance, school completion, type of schooling received, instruction patterns, and test scores. Sometimes includes other information which may be relevant to development plans such as social-economic status, ethnic-racial background, socio-topical indexes, and physical-psychological deviations.

Environment (System)	The larger context in which a system operates, from which it receives its purpose and resources, and to which it is responsible for the adequacy of its output.
Evaluation	Procedure to determine the effectiveness of an instructional product or process to ascertain specific causes for the effectiveness or lack of it, and to make decisions appropriate to the extent of the effectiveness.
Experiential Education	In this study, "experiential education" means learning activities outside the classroom, with learning objectives planned and articulated in advance. Specialized types of experiential education include: internships, cooperative education, educational practica, field experience, field study, preceptorships, clinical experiences, student teaching, work-learning, and work-study.
Fading	In programmed instruction, the progressive diminishing of cues within a teaching sequence so that all prompting is absent.
Feedback	Information which results from or is contingent upon an action or response. The feedback does not necessarily indicate the rightness or wrongness of an action. Rather, it relates the results of the action from which inferences about correctness can be drawn.
Functional Literacy	In this study, it means knowledge in a language that is concrete and usable, not abstract and theoretical. It may at the same time suggest a philosophical theory of language which analyzes the inter-relatedness and interdependence of patterns and meanings within a cultural complex or social system and which emphasizes the interaction of these forms in the maintenance of socio-cultural unity or in meeting bio-social requirements.

Functions	Specific activities that need to be carried out in designing, developing, and maintaining a system in order to facilitate the attainment of the objectives of the system.
Generalization	Learning to respond to a new stimulus that is similar, but not identical, to one that was present during original learning.
Group-Pacing	A procedure in which students progress together toward the same objectives; often employed where self-pacing is not practical for administrative reasons.
Independent Study	A course of study or program fitted to the individual learner's background, abilities, and training needs, in which the learner selects his own materials and proceeds at his own pace. Sometimes referred to as a behavior to be learned.
Learner-Centered	An instructional process in which the content is determined by the learner's needs, the instructional materials are geared to the learners' abilities, and the instructional design makes the learner an active participant.
Learning	A change in the behavior of the learner as a result of experience. The behavior can be physical and overt, or it can be intellectual or attitudinal.
Learning Tasks	Specific knowledge, skills, and attitudes which the student must master to fulfill the objective.
Limitations	Restrictions imposed upon the design, development, and management of a system by its environment. (See also constraints.)
Meta Goals	An approach to learning and personal development which the learner acquires while being educated in a particular system. These goals represent what the learner learns, in addition to the

	content of the instruction, and provide guidance for approaching and resolving subsequent problems outside the classroom.
Neurolinguistics	The study of the neurological mechanisms underlying the storage and processing of language. Although it has been determined that the language center is in the left hemisphere of the brain in right-handed people, controversy remains concerning whether individual aspects of language are correlated with different specialized areas of the brain. In general, very little is known about the neurological aspects of language.
Objectives	Specifies precisely what behavior is expected to be exhibited. (See also behavioral objectives and criterion-referenced tests.)
Peer Training	A method of instruction in which a student who has completed training acts as an instructor to another student in the skill or knowledge to be learned. This procedure continues with each trainee becoming an instructor for the next trainee.
Performance	Executing an act to completion; actual accomplishment of a task to some preset standard of completeness and accuracy.
Process	The ongoing state of a designed entity manifested in doing whatever has to be done to attain the purpose of the system.
Program	A sequence of planned steps or increments which enables the student to master the subject while minimizing uncontrolled error. The student is required to respond to each step and is given immediate feedback to evaluate his response.
Programmed Instruction	A learner-centered method of instruction which presents the information in planned steps or increments, with the appropriate response immediately following each step. The student is

	guided step-by-step to the successful completion of the assigned task or training exercise.
Programmed Text	A book in which a program is usually printed in one of three typical formats: page-to-page, down-the-page, or scrambled. In the first type, the student turns the page after each frame or item, finding the answer and the next item on the next page. A down-the-page format requires the student to mask the answer column and in some cases everything but the item he or she is working on as the page is read from top to bottom.
Psycholinguistics	The study of linguistic behavior as conditioning and conditioned by psychological factors including the speaker's and hearer's culturally determined categories of expression and comprehension.
Response	Any activity which is induced by a stimulus. In instruction, it designates a wide variety of behaviors which may involve a single word, selection among alternatives, the solution of a complex problem, the manipulation of speech mechanisms to produce certain sounds, and so forth.
Response, Covert	An internalized response which the student presumably makes but which is neither recorded nor otherwise available to an observer (for example, a student 'thinks' a response).
Response, Overt	A student's oral, written, or manipulative act which is, or can be, recorded by an observer.
Self-Pacing	A procedure in which students can progress through an instructional program at their own rate. This procedure enables slower students to take as much time as they need. Faster students can finish a course or segment of instruction more quickly and thus have time for other tasks. (See also group-pacing.)

Simulation	A technique whereby low-profile but realistic phenomena are mimicked, permitting cost analysis, potential errors, and compressing or expanding schedule. The simulation may focus on a small subset of the features of the actual real-world situation.
Skills	Skills involve physical or manipulative activities. They often require knowledge for their execution. All skills are actions having special requirements for speed, accuracy, or coordination. In contrast, knowledges are not directly observable. They involve the use of mental processes which enable a person to use symbols. A person "knows" something when he shows he has used the symbols associated with it.
Stimulus	The event, situation, condition, signal or cue to which a response must be made.
System (Instructional)	The composite of equipment, skills, techniques (includes all related facilities, equipment, materials, services, and personnel) that is capble of performing and/or supporting an operational role.
Target Population	The persons for whom the instructional or training materials are designed. Samples from this population are used in evaluating instructional materials during their development.
Task	A unit of work activity or operation that constitutes a logical and necessary step in a performance. A task usually has a logical beginning and end.
Task Analysis	As used in this text, it includes the process of describing job tasks or learning tasks in terms of performance requirements.
Task Description	Verbal description, in column, outline format which describes the required learning behavior at the highest level of generality. Intended to provide an overview of the total performance.

Transfer of Learning or Training	Ability of the learner to apply old (familiar) concepts to new situations. Transfer of concepts is most effective when the learning situation is so organized as to facilitate generalization and the recognition of relationships.
Validation	The process of developmental testing, field testing, and revision of instruction to be certain that the instructional intent is achieved. The system is developed unit by unit and tested (or validated) on the basis of the criterion objectives prepared for each unit. Validation allows instructional designers to guarantee specified results.

RESULTS

The data which constitute the major findings of this study are presented under the following areas: (1) conduct and evaluation of learning activity; (2) administration of course materials; (3) self-assessment testing; (4) conditions of learning; (5) acts of learning; and (6) Tables 12 through 14 which represent an evaluation of instructional methods and instructional media.

Interpreting the data from the above areas should be relatively straightforward and should require little elaboration. Probably the most obvious indication from the results of the analysis that follows is that there appears to be no problem with regard to designing, developing, and implementing an autoinstructional program at an introductory level of second language acquisition.

The autoinstructional approach was based on the set of correlative assumptions dealing with the nature of language and learning. The systematic method discussed under the "procedures" of language teaching outlined a plan for the orderly presentation of language material. As an integral part of approach and method, the techniques presented below deal with the implications of language learning theory in the actual classroom or individual behavior.

Conduct and Evaluation

The testing research plan followed in this study comprise roughly three stages: (1) formulation of an objective for listening comprehension and communicative ability; (2) operationalization of the objective; and (3) validating the operationalization. The actual testing would attempt to assess the effects of several aspects of the teaching system, and to test the overall effectiveness of the program in communicating its content, skills, and concepts to the students.

In addition, the adequacy of the MASTER Program in maintaining student interest and enthusiasm would be evaluated. Finally, an analysis of the day-to-day performance via testing communicative ability would permit a realtime diagnosis of those aspects of the program which the instructional system failed to transmit to the student and an analysis of the adequacy of the hierarchical "rules" sequence in developing specific skills and knowledge. Since the program was intentionally designed to contain what was considered to be the minimum necessary practice and review, an in-depth analysis of the "communicative ability" testing data should provide insights into those areas of the program which would require additional attention, hence, allowing a more efficient allocation of program time to increase practice and review in the revised course proposed for Level 2 requirements (see Appendix G for Level 2, 3, and 4 language proficiency ratings).

Therefore, the emphasis of the Level 1 testing was on the gathering of information to facilitate the revision of both course content and methods of presentation. The assessment of student performance was of peripheral interest, however, with the main focus on certain external criteria which represented standardized measure of Level 1 proficiency. These external measures were not construed as being a means for comparing the program with other methods of instruction, "traditional" or otherwise. In fact, these measures were taken to place the program in perspective. That is, given the performance of students on Level 1, what could reasonably be expected from the revised and expanded program for Level 1, would determine what type of language training requirements might be met by a program of this type and scope.

Though the size of the student group (N-25) prohibited an adequate sampling of the target student population, an attempt was made to select students who were appropriate to that institution. Since some students had some previous exposure to second language acquisition on the secondary school level (French, German, and Spanish) the textbook ALM French, was included in the "rules" matrix (see Appendix C).

Administration

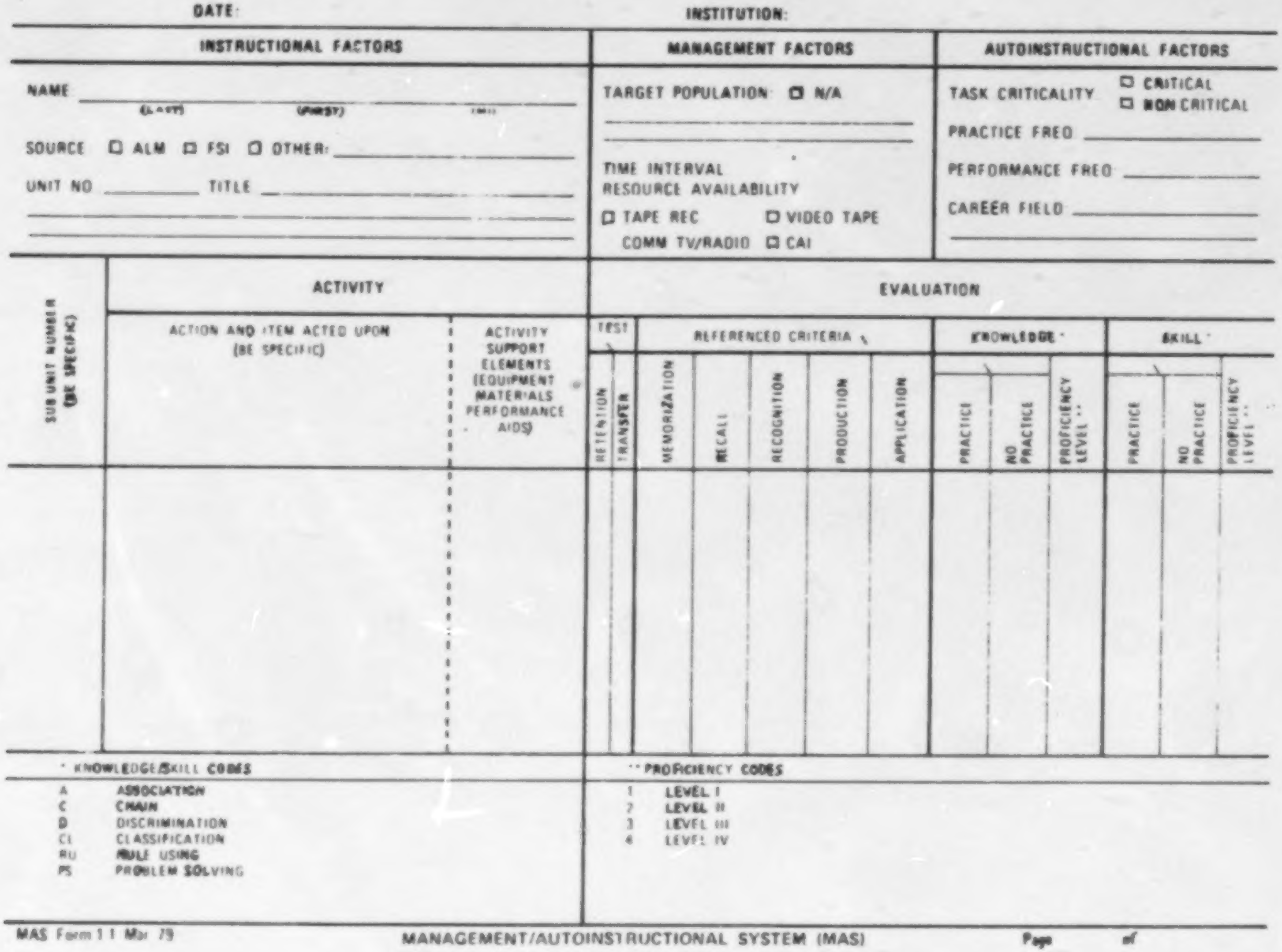
Generally, students were responsible for two units of instruction per week depending on the student's availability, motivation, and abilities. Some students were primarily "one unit" students while others were able to go beyond the "two unit" requirement. However, because the instruction was self-paced, there were no attempts to evaluate the differential effect of one- versus two-unit presentation. In addition, students were permitted to repeat units when they specifically requested to do so, or when testing indicated that proceeding to another unit would be nonproductive. On the basis of this qualified unit progression, only five students asked to repeat a unit, and only three were required to repeat a unit because of inappropriate performance.

Since the students were serviced with off-the-shelf cassette tapes through the 14-week course, testing periods could be scheduled based on each student's progress as annotated on the MAS Form 1 provided for that purpose (see Figure 7). Except for a few minor problems with individual student cassette recorders, which interrupted testing on several occasions, the communicative ability testing proceeded with few interruptions. Some students were required to spend extra time on make-up sessions, but in general, classes progressed through the program with regular two 3-hour sessions per week for the 14-week period.

One student-generated problem, unfortunately, affected the self-paced concept which formed the basis for individualized instruction. Three students who had been involved in the procedures of "traditional" programs (administered during their high school days) were recalcitrant and at times hostile to the self-paced approach. It appeared to them, that the self-paced approach ruled out the competitive atmosphere which they considered necessary to the learning situation. Although they

MANAGEMENT/AUTOINSTRUCTIONAL SYSTEM (MAS)

FORM 1



DATE:

INSTITUTION:

INSTRUCTIONAL FACTORS

NAME ______ (LAST) (FIRST) (MI)

SOURCE ☐ ALM ☐ FSI ☐ OTHER: ______

UNIT NO ______ TITLE ______

MANAGEMENT FACTORS

TARGET POPULATION: ☐ N/A

TIME INTERVAL

RESOURCE AVAILABILITY

☐ TAPE REC ☐ VIDEO TAPE

COMM TV/RADIO ☐ CAI

AUTOINSTRUCTIONAL FACTORS

TASK CRITICALITY ☐ CRITICAL ☐ NON CRITICAL

PRACTICE FREQ ______

PERFORMANCE FREQ ______

CAREER FIELD ______

SUB UNIT NUMBER (BE SPECIFIC)	ACTIVITY		EVALUATION												
	ACTION AND ITEM ACTED UPON (BE SPECIFIC)	ACTIVITY SUPPORT ELEMENTS (EQUIPMENT MATERIALS PERFORMANCE AIDS)	TEST		REFERENCED CRITERIA					KNOWLEDGE *			SKILL *		
			RETENTION	TRANSFER	MEMORIZATION	RECALL	RECOGNITION	PRODUCTION	APPLICATION	PRACTICE	NO PRACTICE	PROFICIENCY LEVEL **	PRACTICE	NO PRACTICE	PROFICIENCY LEVEL **

* KNOWLEDGE/SKILL CODES

A	ASSOCIATION
C	CHAIN
D	DISCRIMINATION
CI	CLASSIFICATION
RU	RULE USING
PS	PROBLEM SOLVING

** PROFICIENCY CODES

1	LEVEL I
2	LEVEL II
3	LEVEL III
4	LEVEL IV

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FIGURE 7

recorded their unit-by-unit progress from the outset, those students critical of the program seemed more concerned with their progress vis a vis other students than their own unique problems relative to second language acquisition.

Though the progress of the critical students, through the program, was not smooth and uneventful, it soon became evident that their influence in the classroom tended to introduce group-paced concepts into the teacher-student relationship. This influence was reinforced by the personal one-for-one relationship maintained between students and instructor throughout the course. That is to say, those students opposed to individualized instruction were occasionally outspoken critics of the course and materials. The extent of this criticism would be evaluated in the questionnaire-survey to be administered at the end of the course.

All students were observed at all times during their progress through the program, unit-by-unit notes were recorded by the student on the MAS Form 1, which was reviewed by the instructor after each session, so that individual as well as group performance could be interpreted. In addition to unit-by-unit records of student performance, program - communicative ability and diagnostics - tests were administered throughout training.

The diagnostic test was designed to measure student attainment of lexical and practice drill material (sub-objectives). Student failure on these tests identified weak areas in instruction, provided clues to failure, and helped determine the type of system revision needed. Test items were developed for either oral or listening performance. The latter was preferred, because listening performance related directly to the type of behavioral objective stressed during instruction.

During communicative ability testing, complete instructional sequences were empirically tested on all students. There were three reasons for conducting operational tryouts using all students: (1) the instructional materials would be evaluated as an integral part of the total system; (2) analysis of data from this larger group would provide a sound basis for minor modification directed specifically at the target population; and (3) this offered an opportunity under general operational conditions, to assess administration, equipment, facilities, or other problems that might surface later.

Self-Assessment Testing

In the implementation, conduct and evaluation of the MASTER Program, various kinds of self-assessment forms were proposed. The Type A form relied on the learner's ability to judge his overall language proficiency upon completion of Level 1 requirements (see Appendix H for the Type A self-assessment form). The hypothesis was that most learners have a certain capacity for determining their own language ability provided they have suitable means with which to express their judgments.

By way of example, the Type B form specified very concrete situations, each of which requires mastery of a particular language skill (see Appendix I for the Type B self-assessment form). The learner indicates his or her ability to deal with language proficiency on a scale ranging from no ability at all to complete mastery of the situation.

Another type of self-assessment tool was based on certain objectives stated in the Units of the basic text(s). A comprehensive rating scale from 0 - 4 was worked out and recommended for use (see Appendix J for the Type C self-assessment form).

Finally, the components of the specification of Level 1 objectives (socio-topical) were represented in the Type D self-assessment form to be used for introspective judgment of language ability (see Appendix K for the Type D self-assessment form).

It should be stressed here that the self-assessment procedures are primarily intended for autonomous learners, in conjunction with and ancillary to the formal communicative ability testing. It is also pointed out that the exact techniques to be used from the menu of self-assessment forms cannot be specified until it has been made clear what type of teaching methodology the MASTER Program is going to embody for a given student's needs. Evaluation within the MASTER Program will require many and varied testing techniques. The most important function of tests in any individualized instructional system is to provide constant feedback to the learner as he or she progresses through the varous units of course work. Since testing communicative ability and self-assessment approaches, at the introductory level, are more or less new fields in language testing, it was considered important to make concrete (albeit tentative) proposals which could be tried out in classroom and field experiments.

The conduct of autoinstruction and the evaluation of self-assessment testing highlighted the importance of building practice into a matrix of purposeful activity, so that the attention of the student was on the extraction of information from instruction based on conditions and acts of learning.

Conditions of Learning

In conjunction with the proper use of methods, materials, media, and technique, the "basic sentences," and lexical and practice drills represented to a great extent the hierarchy of the eight "conditions of learning" popularized by Robert Gagné's behavioristic-eclectic psychology: (1) signal learning; (2) stimulus-response; (3) chaining; (4) verbal association; (5) discrimination; (6) concept learning; (7) rule learning; and (8) problem solving (see Table 10 for action verbs for specific conditions of learning).

Signal Learning, Stimulus-Response, and Chaining

The basic sentences preceded by build-ups exemplified signal learning, stimulus response, and chaining. The correct student behaviors were practiced until they became fixed and established. During this initial phase of language acquisition, students learned to link component parts of the verbal chain into their proper sequence. This phase continued until each student could perform the basic sentences with minimal error. For the purpose of the sentences, the proficiency reached at the end of this phase satisfied training objectives.

Verbal Association

The substitution drills were an example of verbal association, as they provided for the manipulation of forms by substituting specific items in fixed sentence forms. The student learned to associate verbal response with one specific

ACTION VERBS FOR SPECIFIC CONDITIONS OF LEARNING

Association

- associate
- identify
- indicate
- label
- match
- mate
- name
- repeat
- reply
- respond
- say
- specify
- translate

Motor Chaining

- activate
- adjust
- align
- close
- copy
- disassemble
- disconnect
- draw
- duplicate
- grasp
- insert
- lift
- load
- locate
- loosen
- manipulate
- measure
- move
- open
- operate
- pick up
- press
- pull
- push
- remove
- replace
- rotate
- set
- slide
- signal
- stencil
- tighten
- trace
- tune
- turn off-on
- twist

Verbal Chaining

- cite
- copy
- enumerate
- itemize
- letter
- list
- quote
- recite
- record
- reiterate
- repeat
- reproduce
- restate
- tabulate
- transcribe
- type
- write

Discriminating

- choose
- compare
- contrast
- couple
- decide
- detect
- differentiate
- discern
- distinguish
- divide
- isolate
- judge
- pick
- recognize
- select

Concept Learning

- allocate
- arrange
- assign
- characterize
- categorize
- catalogue
- classify
- collect
- compile
- file
- grade
- group
- index
- inventory
- mate
- order
- rank
- rate
- sort

Rule Rusing

- anticipate
- calculate
- calibrate
- check
- compute
- conclude
- convert
- coordinate
- coorrect
- deduce
- define
- demonstrate
- determine
- diagram
- equate
- estimate
- evaluate
- examine
- expect
- explain
- extrapolate
- figure
- foresee
- generalize
- illustrate
- infer
- interpolate
- interpret
- monitor
- organize
- plan
- predict
- prescribe
- program
- project
- schedule
- translate
- verify

Table 10

Problem Solving

accommodate
adapt
adjust to
analyze
compose
contrive
construct
correlate
create
design
develop
devise
diagnose
discover
find a way
invent
realize
reason
resolve
study
synthesize
think through
troubleshoot

The above verbs may serve as planning guides to assist the system designer, instructor, and student determine knowledge and skills for individual activities, in implementing vocabulary items in drill sequences appropriate to specific actions.

Table 10 (Cont'd.)

input, and no other. Substitution also tended to build up "verbal chains," or the recalling of long verbal sequences in one specific sequence, and no other.

The effect of practice on verbal association was not as clear-cut as the effects of practice requiring "signal learning," "stimulus-response," and "chaining." The more meaningful the material, (for example, vocabulary related to career fields or subject areas) the less practice the student needed to acquire a verbal association or chain. Less motivated or weaker students performed better on difficult material if an overt response was required. Overt responses allowed correction of errors before they became habits and before the student became distracted or fatigued.

Discrimination

The vocabulary drills provided practice in discrimination, in the use of new vocabulary items and also in the manipulation of sentence elements whose particular form and management depended upon their association with a vocabulary item.

In discrimination learning, each student performed responses to different items of a particular class. That is to say, the student discriminated between inputs and responded differently to each. However, with items such as vocabulary items, the student was not expected to distinguish between the association of an input (or output) unless trained.

Consequently, if the student could not associate the right response with the right input; the instructor assisted by discriminating among inputs (or outputs) to make the correct associations. Translation drills were examples of "multiple discriminations" and "multiple associations," because the student had to associate and discriminate with verbal chains in two languages to make the required responses.

Concept Learning, Rule-Using, and Problem Solving

The French "rules," pronunciation and response drills, and conversation practice assisted the student in concept learning, rule-using and problem solving.

Concept learning (or classification) involved grouping related things together, and calling them by the same name. For example, the student responded in a certain way to all members of a class of objects, such as "automobiles." The student was required to determine the essential difference between inputs that were members of that class and inputs that were not members. Retention occurred best when the student was exposed to both "examples" and "non-examples" of a particular class.

Rule-Using

In the French "rules" a distinction was made between stating a rule and using a rule. If the student was required to merely state a rule, the type of learning was "verbal chaining." If a student demonstrated his understanding of a rule by applying it to the use of the language, the type of learning involved was "rule-using."

Problem Solving

Response drills and conversation practice were examples of two types of problem-solving. The response drill was considered reproductive problem-solving, requiring less creativity than the more complex productive problem-solving of free conversation. Problem-solving required that the student chain lower-level rules together to produce a new, higher-order rule.

Acts of Learning

Robert Gagné's eight phases of an "act of learning" applied equally as well as his "conditions of learning" to the conduct and results of this study. In the "act of learning," the hierarchy of activities listed in order of their occurrence are: (1) motivation; (2) apprehending; (3) acquisition; (4) retention; (5) recall; (6) generalization; (7) performance; and (8) feedback.

Motivation and Apprehending

A phenomenologist or Gestalt-field theorist would interpret Gagné's position as providing an inadequate psychological basis for reflective teaching and learning. Field psychologists were primarily interested in just one of Gagné's "acts" of learning, motivation. Field theory was used in this practicum, not as a "theory" of learning, but as an application of learning theory. In regards to motivation, the basic center of learning was conceived by this study to be the life space or psychological environment of the student.

This study assumed that individuals, and also groups would vary widely not only in general language aptitude, emotional involvement, and degree of pre-existing motivation; but also in their ability to make immediate use of lexical content consisting of linguistic, and socio-topical material. Therefore, motivation and apprehending were thought of in terms of the teacher's contribution - specifically, the teacher's ability to organize the content and present it with due regard for the pupil's ability and readiness to acquire it.

Acquisition

Most failures of acquisition were contributed to the lack of practice or insufficient practice of behavior to be learned or inadequate feedback conditions about the correctness of practice. Remedial steps included: (1) scaling down the practice in the early stages of learning by adding cues; (2) exaggerating differences and similarities among inputs to call attention to essentials; and (3) ensuring that the lexical and practice drills were appropriate for the type of learning experience.

Retention and Recall

To revise the system based on retention or recall failure, task items were reviewed for overcueing. If appropriate, certain cues were faded to allow for practice and/or multiple unassisted practice opportunities. Other remedial steps included scheduling practice sessions to improve retention/recall and reviewing sequences at the end of each practice session.

Generalization and Performance

System revision based on performance failure involved determining if a sufficient number of examples were included in instruction with practice opportunities across the full range of learning conditions. If not, examples were added ensuring that at least 50 percent of the examples were negative examples.

Feedback

In addition to failure of acquisition, retention, recall, generalization, and performance, the instructor sometimes failed to train the student to the criterion level because of the conditions of difficulty intrinsic in the material to be learned. To address this problem, feedback and system revision were also used (see Table 11 for decision logic applied to learning difficulties).

DECISION LOGIC APPLIED TO LEARNING DIFFICULTY

Source of Difficulty	Description	Type of Learning Affected
Complex Component Parts	All or some of the component parts which make up the action cannot be performed by the student. Before the student can perform the action he or she must be capable of performing the individual or subordinate skills which make up the larger action. The more complex the component parts, the more difficult the action will be to learn.	All types of learning except Verbal Association.
Interference from Previous Learning	The student has previously learned a response which interferes with learning the new response. The stronger the old response, the harder it will be to learn the new response. The old response will be resistant to change and interfere with learning.	All types of learning.
Length of Chain	The longer the chain, the harder it is to perform all parts of the chain and in the right order.	Motor Chains, Verbal Chains, Rule-Using, Problem-Solving.
Number of Inputs/ Outputs	The more inputs/outputs there are to be associated, discriminated, or classified, the harder it will be to learn to either: (1) associate each with the correct action; (2) tell the difference between them; or (3) see their essential similarity.	Verbal Associations, Discriminations, Classification (concept) Learning.

Table 11

Dissimilarity of Inputs/ Outputs	The greater the apparent dissimilarity among inputs/outputs the harder it is to see their essential similarity. The learner tends to see them as different.	Classification learning.
Large Numbers of Attributes for each Input/Output	The more attributes of inputs/ outputs there are to attend to, the harder it is to tell them apart or to see their essential similarity. For example, it is harder to rank students on the basis of 10 characteristics than on the basis of 2 characteristics.	Discrimination Learning, Classification Learning.

GUIDELINES FOR OVERCOMING DIFFICULTIES*

Difficulty	Guidelines
Long Chains	Provide several demonstrations of the chain. Point out relevant cues the student should attend to. Provide cues which the student can attend to during practice. Series of illustrations, diagrams, or other graphic devices may be used. If the chain can be divided into meaningful parts, provide practice on component parts. Gradually combine parts until the entire chain is performed.
Interference	Provide frequent opportunities for practice. Cues will probably have to be faded less slowly than if interference did not exist.
Complex Component Parts	Provide for training in the component skill before attempting to teach the student to perform the overall skill.

*NOTE: These guidelines apply mainly to motor skills involved with pronunciation, articulation, intonation, and so forth.

Table 11 (Cont'd)

	Guidelines for training a complete motor skill (i.e., pronunciation) also apply to learning of component skills.

GUIDELINES FOR OVERCOMING DIFFICULTIES
VERBAL ASSOCIATION AND CHAINS

Difficulty	Guidelines
Large Number of Associations	Provide a warm-up or pretraining session on similar material and fade verbal or pictorial cues slowly. Cluster or accumulate the inputs and actions into groups which are meaningful to the student. For example, material relevant to career field or liberal arts areas.
Long Chain	Divide the chain into meaningful parts and provide practice on component parts. Gradually combine parts until the entire chain is learned.
Interference	Cue potential differences in confusing material by the use of visual devices such as graphics, diagrams, and so forth.
Complex Component Part	Provide training in the component skill before attempting to teach the student to perform the overall task. The guidelines for verbal learning given above apply to whole or part tasks.

GUIDELINES FOR OVERCOMING DIFFICULTIES
DISCRIMINATIONS

Difficulty	Guidelines
Large Number of Inputs	Provide multiple practice opportunities with each input. Present all inputs simultaneously or in close succession so that students can see the essential difference among inputs.

Table 11 (Cont'd)

Similarity of Inputs	Exaggerate differences. Ask the student to define the basis for discrimination.
Large Number of Attributes	Reduce attributes students must attend to early in training, gradually requiring the student to make the discrimination on the basis of more and more of the attributes until the student is performing at criterion level.
Interference	Cue differences and increase practice opportunities.
Complex Component Part	The student may not be capable of making some or all of the component associations he needs to discriminate between inputs and actions. First, provide for practice of each association singly.

GUIDELINES FOR OVERCOMING DIFFICULTIES (CONCEPT LEARNING) CLASSIFICATIONS

Difficulty	Guidelines
Large Number of Inputs	Provide practice opportunities across the full range of inputs. Present examples simultaneously or in close succession so that students can see the essential similarities among inputs.
Dissimilarity of Inputs	Exaggerate similarities. Ask the student to provide a definition of the concept.
Large Number of Attributes	Reduce the number of attributes to be learned. Focus on those you think most important early in training, gradually add attributes until criterion performance is reached. Make important attributes obvious with cues or by otherwise calling attention to them.
Interference	Provide overview or advance organizer which calls attention to differences between previously learned materials and new learning materials. Ask the student to define the concept.

Table 11 (Cont'd)

Complex Component Part	Before the student can undertake learning of a concept, he must have the prerequisite verbal mediators (names and descriptions) of the concept to be learned.

GUIDELINES FOR OVERCOMING DIFFICULTIES RULE-USING

Difficulty	Guidelines
Long Chain	If the principle involves the chaining of several concepts, first deal with meaningful units of the chain. Gradually combine units until the full principle is demonstrated.
Interference	Provide advance organizer or overview which calls attention to previously learned principles and the new principle. Ask the student to define the principle.
Complex Component Part	Provide instruction for component concepts. Follow guidelines for the teaching of classification (concept learning).

GUIDELINES FOR OVERCOMING DIFFICULTIES PROBLEM-SOLVING

Difficulty	Guidelines
Long Chain	If the solution involves the chaining of many concepts and principles, first deal with meaningful units. Gradually combine links until the full solution is demonstrated.
Interference	Provide advance organizers or overviews which call attention to the differences between previously learned solutions to problems and the problem at hand.

Table 11 (Cont'd)

Conduct and Evaluation of Teaching Methods

The results of this study indicated that teaching methods should focus on the instructor's role in initiating and implementing instructional techniques and materials. In general, the instructor should act as individual tutor, linguist, counselor, and expository by introducing selected materials and techniques to supplement classroom and autoinstructional work.

Table 12 provides a listing of the instructional methods used in this study, followed by an evaluation of the strengths and weaknesses of each method.

INSTRUCTIONAL METHODS

Method	Purpose
Lecture	A discourse given before a class or an audience for instructional purposes.
Demonstration	An accurate portrayal of the precise actions necessary to perform skills or processes.
Recitation	A discourse by the student before an instructor in which the student relates what he or she has learned through previous study.
Discussion	Interaction between students and/or an instructor in order to analyze, explore, and/or debate an issue, topic, or problem.
Performance	Student practices, performs, and applies, under controlled conditions and close supervision, the skills or knowledges which have been previously explained and demonstrated.
Independent Study	Assigned reading or research which the student undertakes on his own without special guidance or instruction.
Programmed Self-Instruction	Instructional materials prepared specifically to employ techniques of programming. Classical programmed instruction variables include small steps, carefully sequenced and cued to reduce errors; immediate feedback; and freedom on the part of the student to vary his own rate of learning.
Peer Training	A student who has completed training acts as an instructor to another student. During the peer training, the student instructor may use any of the instructional methods listed here.
Simulation	Representation of some aspects of reality (either a process, event or hardware) by symbols or devices that can be manipulated more readily than their actual counterparts.

Table 12

Lecture

The lecture method was used during the early stages of learning, when dealing with programmed materials and/or discussing techniques relative to the audio-lingual approach. Lectures were more effective when the instructor prepared an outline in advance, organized the topic into meaningful segments, used audio-visual aids to demonstrate concepts, and allowed time for question-and-answer sessions to clarify complex points.

Weaknesses of the lecture method included: (1) student participation was limited; (2) student attention and interest lessened after long periods; and (3) evaluation of the learning experience was difficult due to the beginning student's inability to contribute in discussion during question and answer periods.

Demonstration

The demonstration method was most effective when the instructor simultaneously provided simple explanation to a required action or response during his presentation, explained why as well as what was being performed, pointed out critical aspects of the process or procedure, and provided repetition of complex functions. This method was immediately reinforced by supervised training and practice sessions.

Weaknesses of the demonstration method included: (1) success of the demonstration weighed heavily on the instructor's ability to verbally explain each step being demonstrated; and (2) since the student did not perform during most demonstrations, evaluation of the learning process could only be determined during later student performance.

Recitation

The recitation method was used during intermediate or final steps of a learning experience. It was effective only when the instructor advised the student well in advance that an assessment of progress would be made through the student's oral recitation. The recitation was reinforced by a question and answer session which provided student feedback and enabled further assessment of the learning process.

Weaknesses of the recitation method included: (1) student recitation was sometimes by rote; (2) students not reciting were limited in their participation during group activity. This sometimes caused inattention and lack of interest.

Discussion

The discussion method was effective during the intermediate or final stages of a learning experience. Knowledge of the subject matter was mandatory for both instructor and students. Best results were obtained when the instructor verbally outlined the specific problem or issue, or provided a case study of the situation prior to the discussion.

One weakness of the discussion method was that, although it ensured interaction between students and instruction during analysis or debates on issues or topics, this method was time consuming and limited by the size of the sampling frames.

Performance

The performance method was used during intermediate and final stages of learning. Student skills and development were planned from the simple to the complex. This method required an unusually higher student/instructor ratio than other methods of instruction. This problem was alleviated to some extent by the use of the "peer training method."

Peer Training

The peer training method was effective during all stages of learning as it provided one-to-one instructor/student relationship by using students to instruct students. The instructor acted as coordinator as he spot checked group seminars, maintained a quality control, and offered remedial information or instruction as needed.

Independent Study

The independent study method was more serviceable during the final stage of learning or as an adjunct to beginning or intermediate methods to improve the student's performance standards and to allow pursuit of a special interest not shared by other students.

The instructor provided research sources and/or material tailored to the student's needs, including a statement of primary objectives. Written or oral performance tests were employed to evaluate progress; and the effectiveness of this method depended upon the student being capable to setting his own goals and using this method as a behavior to be learned rather than as a mere means to an end.

Programmed Self-Instruction

The programmed self-instruction method was useful during all stages of learning to accommodate individual differences in rate of learning, to provide uniformity of instruction as all students progressed through the same material. During the early stages of learning, this method was the sole source of instruction; later it was used to supplement other methods. Programming was effective because it allowed students to complete material at home or at their convenience.

Weaknesses of the programmed self-instruction method included: (1) once developed, programmed materials could not be altered easily to incorporate career field or liberal arts data; (2) all students had to go through the same sequence creating a degree of inflexibility; and (3) some students using this method objected to lack of social interaction, while others found it a convenient tool to remain isolated from peer involvement.

Simulation

The simulation method was effective during all stages of learning. This method was useful in providing analogous circumstances and allowing practice and feedback under low-profile situations. During the early stages of learning, a minimum degree of realism was required. That is to say, the student was merely expected to learn vocabulary, useful phrases, identify the location of objects, appropriate responses for a given stimulus, and so forth.

During the intermediate stages of learning, moderate degrees of realism were required. The student was expected to perceive information in larger blocks or patterns and begin to coordinate skills. In the final stages, a high degree of realism was required.

One weakness of this method was that it usually required a high student/instructor ratio, causing lack of attention and interest among those students not participating.

Use and Evaluation of Instructional Media

The results of this study indicated that instructional media, whatever the form, served as vehicles for enhancing the effectiveness of the methods and approaches discussed above. Selection of the most appropriate medium depended on content, display, cost, and suitability (see Table 13 for a listing of instructional media).

The five media classes in Table 13 required student involvement to varying degrees of an "active to passive continum," from the active tutorial, environmental, and print media to the passive visual aid and transient.

Table 14 provides a media/medium listing, followed by an evaluation of the effectiveness of the various media used in this study.

INSTRUCTIONAL MEDIA

Type Media	Medium	Materials
Tutorial	Computer-Assisted	Programmed
	Programmed Text	Print, Still Pictures
	Teaching Machines	Print, Still Pictures
	Learning Lab	Carrels, Audio Tape, Recorders, Microphones and Earphones
Environmental	Simulator	Procedures
	Games, Role-Playing	Procedures
Print	Textbook	Print, Still Pictures
	Microform	Microfiche and Microfilm
Visual Aids	Graphics	Charts, Diagrams, Graphs, Illustrations/ Drawings, Photographs
	Exhibits	Cutaways, Mock-ups and Models
	Opaque Projections	Nontransparent Stills
	Overhead Projector	Transparent Stills
	Slides	2" X 2" 35mm Slides
Transient	Radio	Live Presentations, Tape
	Tape Recorder	¼" Mag Tape, Cassettes
	Record Player	Disc Recordings
	Listening Lab	Carrels, Audio Tape, Recorders, Earphones
	Filmstrip (Silent)	Color or Black & White
	Motion Picture	Color or Black & White
	Slide Project and Filmstrip (Sound)	Color or Black & White

Table 13

MEDIA/MEDIUM LISTING

	Production Costs	Equipment Costs
TUTORIAL MEDIA		
Computer-Assisted Instruction	Very High	Very High
Programmed Text	High	Low
Teaching Machines	High	High
Learning Lab	High	Moderate to High
ENVIRONMENTAL MEDIA/AIDS		
Simulator	Moderate	Moderate
Games	Moderate	Moderate
Role Play	Low to High	Low
PRINT MEDIA		
Textbook	Moderate	Low
Microform	Low	Moderate
VISUAL AIDS: GRAPHICS		
Charts	Very Low	Very Low
Diagrams	Very Low	Very Low
Graphs	Very Low	Very Low
Illustrations/Drawings	Very Low	Very Low
Photographs	Low	Low
VISUAL AIDS: EXHIBITS		
Cutaways	Low to High	Low to High
Mock-Ups	Low to High	Low to High
Models	Low to High	Low to High
VISUAL AIDS: PROJECTED STILL IMAGES		
Opaque Projections	Very Low	Low
Overhead Transparencies	Very Low	Low
Slides	Low	Low

Table 14

	Production Costs	Equipment Costs
TRANSIENT MEDIA: AUDIO		
Radio	Low	Low
Tape Recorder	Low	Low
Record Player	Moderate	Low
Listening Lab	Moderate	Moderate
TRANSIENT MEDIA: VISUAL		
Filmstrip (Silent)	Low	Low
Motion Picture as Repetitive Loop (Silent	Moderate	Moderate
Textbook	Low	Low
Microfilm	High	Moderate
TRANSIENT MEDIA: AUDIOVISUAL		
Sound/Slide Projector	Low	Low
Filmstrip (Sound)	Low	Low
Television	High	High
Motion Picture	High	Moderate
Motion Picture as Repetitive Loop	High	Moderate
Video Tape	Very High	Very High

Table 14 (Cont'd)

Tutorial Media

Tutorial media created the most active student involvement. Instruction was so individualized that the student controlled the rate of presentation. The programmed FSI text and "learning lab" atmosphere allowed for individual differences in entering behavior. More advanced students were able to branch and/or bypass certain parts of the instruction, while weaker students received remedial instruction.

Environmental Media

Environmental media demanded certain student responses to or manipulation of text material. The simulation and role play of the "basic sentences," normally did not permit the degree of individualization typical of tutorial media. Nevertheless, there was some overlap of the first two classes of media, because the environmental media was programmed and often tutorial.

Print Media

The third class, printed media, required the student to engage in active behaviors such as scanning text materials and decoding print. Reading behavior, however, could be either concentrated or less involved depending on whether the student studied intensely or merely scanned the text.

Visual Aids

Visual aids supported instruction by providing written text or graphics that the student viewed and interpreted.

Normally, the quantity and quality of information contained in visual aids was less than that in the basic text materials. Thus, student involvement depended to a large extent on instructional materials supported by the visual aid.

Transient Media

Transient media generally contained the largest number of different classes of media. Most audio/visual material fell into this category. The stimuli were "transient" in terms of the duration with which they were presented. For example, the message in media such as film, audiotape, or slide tape presentation, progressed at a predetermined rate. If a student's attention lagged during the presentation, he or she could miss an important part of instruction.

Conclusions

The results of this study indicated that the conditions and acts of learning were conceived as a rapprochement with the cognitive-field approach and a modification of a strictly audio-lingual approach, both from theoretical and practical viewpoints.

Although there was some emphasis placed on practice drills and response patterns, the techniques did not follow the somewhat narrow view of structural linguists which holds that language learning is habit formation. Thus, the approach, methods, and techniques used in this study closely reflect linguistic views about the nature of language which hold that language is a "rule-governed" creative system. The discussion and recommendations in the next section elaborate of this theme.

DISCUSSION AND RECOMMENDATIONS

The results of this study indicated that the MASTER program placed greater emphasis upon student acquisition or control of high-frequency sentence patterns than upon vocabulary building or translation exercised from one language to another. However, basic course materials and techniques were integrated with the vocabulary and lexical patterns of each student's career field or professional area of interest. The discussion that follows outlines some of the more important aspects of: (1) instructional methodology; (2) instructional media; (3) recall and performance; and (4) curriculum development.

Instructional Methodology

Probably the most salient feature of the program and the one which differentiated it from most "traditional" approaches to language acquisition was the nature of cueing methods used for eliciting relaxed and spontaneous student responses. Although it was not possible to dispense altogether with imitation-type exercises, memorization, nor with translation activities, it was evident to both student and instructor that this would be a temporary expedient toward full participation in simulated and actual situations demanding uninhibited communication in the target language.

In general reference to content and instructional specification, MASTER course objectives hypothesized that language and communication take place in real time, and that the structure of language is understood, for the most part, in temporal patterns because of the primary oral character of natural language.

More specifically, the evaluation discussed here concerns the problems associated with the temporal sequence of information and the decoding process. This communication perspective implies that this study considers temporality as a definite constraint to the instructional methodology, both with respect to the ways in which the instructor expressed himself in the target language and the manner in which the student interpreted the information received. Thus, the instructional methodology served to constrain and also to direct language processing, but the information had to be processed by individuals. It was, therefore, necessary to adopt a social perspective when language was to be understood by the group. But, when the concern was to explore in more detail what had happened in the communication situation, this perspective had to be supplemented with serious consideration for the problems of acquisition in an individual-processing mode.

The instructional methodology also related the sequence problems encountered in oral language to sequence problems within other areas of the instructional system, mainly manifested through written language and visual perception. Despite the hierarchical advantages of the instructional system, the process of understanding language was much more difficult to witness in terms of sequences of discrete elements, probably because what happened in the immediacy of real time was too confounded and complicated. In an attempt to isolate sequences of discrete elements, internal evaluation was attended in two ways: (1) the language material was systematically varied with respect to temporal sequence; and (2) the purpose was to explore the process of language acquisition as something developing over time rather than the end product of such a process.

However, statements like "the dimension of language patterns are entirely of a temporal nature," in respect to methodology, were seriously questioned. Hence, when language acquisition was the subject, every act of oral verbal communication involved both a speaker and listener, the I-Thou relationship of communication. This relationship was revealed in encoding as well as decoding which brought into focus patterns or structures of a simultaneous character as well as temporal. Thus, encoding involved aspects of anticipatory decoding, which affected the speaker's choice of word order when it had an obvious impact upon the decoding process. Therefore, word order in encoding was examined in close relationship to the consequences of different word orders upon the decoding process.

Instructional Media

The collaboration between scholars and others, (linguists, psychologists, and philosophers of language), discussed previously in this study, should be of common interest to our discussion of instructional media. Especially relevant to the topic is the "picture theory" advocated by Wittgenstein in his early period in the Tractatus. The "picture theory" is characterized by commitments to "conceptual realities" and fixed rules for word order and word meanings. The dimension of time and sequence, under this theory, becomes accordingly of less importance. Thus, one could conclude that the picture theory, in essence, makes for detemporalization rather than the temporalization previously mentioned in connection with encoding and decoding. Linguistic theory, in the context of a "picture theory," can be defined as the ideal speaker's - listener's knowledge of the language, which suggests a relationship to detemporalized items such as vocabulary, lexical patterns, and rules of grammar. As a consequence, the "rules matrix" and vocabulary items peculiar to each student's career field or area of interest served as a pictorial cross-reference source of standardization, operating as vehicles to superimpose the socio-topical and cultural information of the French Basic Course, Langue et Langage, and Parole et Pensée textbooks.

Recall and Performance

Performance, as an integral part of the instructional system, refers to actual language use in concrete or simulated situations. In addition to this cognitive reference, the associative and emotive components were also considered as temporal extensions of the act of reference in the performance phase. When a specific word or word order was encountered in the context of natural performance, the patterning of meaning processes differed from that of the teaching/learning situation when the single word or word order was presented for some particular purpose. Thus, the primary advantage of performance was the understanding and processing of words as a part of a normal communication situation where the open and dynamic character of words becomes quite evident.

Curriculum Development

The results of this study indicated that the course administrator was responsible for gathering the necessary materials and equipment, recruiting both students and native speakers, describing the basic rules of procedure, selecting textbooks and related taped material to meet student needs, monitoring students' classroom activity, recording communicative ability and self-assessment tests to measure each student's weekly progress, and administering these tests with assistance from native speakers. Although program administration was time consuming at the beginning (secretarial assistance would have been helpful during this activation phase), it was nevertheless interesting, and the results rewarding.

Materials, equipment, and resources for the program included: (1) highly motivated students; (2) commercially available audiolingual-oriented textbooks prepared by the Foreign Service Institute and publishers from the private sector with complete sets of accompanying tapes; (3) access to a portable tape recorder for each participating student; (4) an individual from the community to serve as a pronunciation and source, not as an instructor; (5) an impartial evaluator to measure progress and furnish the grade for the term's work; and (6) a faculty member familiar with audiolingual and self-instructional techniques to serve as parttime consultant for the entire program.

The program required very little classroom instruction, no minimum enrollment, and no formal instruction in grammar. Inasmuch as each student was on his or her own, the rate of progress was only limited by student ability and initiative. Although methodology no doubt played an important role, the administrator was more concerned with teaching the learner how and what to learn. It was assumed that innovations are not necessarily successful because they are in vogue or because they represent something modern. It was evident from the outset that the use of modern approaches was accepted by the students because they were able to participate in the formulation of goals, content, and instructional activities.

To obtain optimum results from the MASTER Program, curriculum developers should adhere to the following propositions: (1) acquisition of basic language skills requires an enormous amount of individual practice; (2) the functional command of a language is considered more important than a theoretical understanding of it; (3) students are expected to have different degrees of motivation and different learning rates; (4) not all students can profit from the study of a second language, but those who are highly motivated must be given the opportunity to do so at the college level; (5) limited funding makes in-class instruction prohibitively expensive; (6) since effective language training tends to be both time-consuming and repetitious, most classroom activity can be economically replaced by the cassette tape recorder for individual practice; (7) grammatical rules should be structured in hierarchical sequence and designed to supplement rather than order the learning process; (8) a student who has access to a tape recorder, and can work whenever he feels like it, will voluntarily use his tapes far more often and conveniently than a student who has to attend a compulsory classroom session; (9) it is unnecessary to have a native speaker or paraprofessional in residence throughout the school year; (10) periodical evaluation by a native speaker or equivalent is essential to maintain the program's academic standards; and (11) operating costs are such that, once established, a sound self-instructional program is self-supporting with only two students in it.

RECOMMENDATIONS

Based on the results of "Level 1" performance, it was recommended that the MASTER Program be implemented for introductory level (Level 2) language courses at the introductory level. The major obstacle to implementation of the program on higher levels of learning is the availability of the presentation model. The sequential stages of the model used for the introductory level is an intricate part of the teaching/learning system on that level; hence, any significant change in the interactive capabilities of the system would no doubt reduce its effectiveness. The method used in the present study is a research model. Therefore, it was recommended that investigation should be undertaken to develop a simplified model to be used as a final production model to supplement existing courses.

It was recommended that the MASTER Program be used to supplement the foreign language curriculum at the introductory level, although there are certain problems involved in attempting to integrate an introductory auto-instructional course in the existing academic curriculum. Students complete the MASTER Program at different times, and the content of the program may not coincide with that of other more traditional introductory approaches. There seems to be some agreement on what the performance requirements are for intermediate or advance course work in a second language, but there is little agreement on what the terminal behaviors of an introductory course ought to be.

The recommendation to incorporate the MASTER Program into the curriculum was based on the proposition that the adoption of the auto-instructional language materials and techniques on an introductory level rests upon the availability of a comprehensive program package, such as "rules" matrixes, socio-topical matrixes, and on-the-shelf audiovisual materials. It is this kind of package that would significantly reduce the instructional workload in the traditional academic instructional environment, and eventually provide the teacher of intermediate level courses with an essentially motivated group of students with respect to their past exposure to and command of the knowledge and skills of the target language. The results of this study indicate that there should be a reasonable amount of confidence that an introductory level course (Level 2) can also be programmed using the procedures and methodology of the MASTER Program.

In view of the autoinstructional approach of the MASTER Program, it may be difficult for departments of foreign languages to accept the validity of the learner-centered methodology. For this reason it is vital that a coordinator be assigned who has contact with the foreign language faculty and will cooperate with it and help its members see the program as a complement to, rather than a substitute for their offerings. As MASTER Program enrollments in the French language grow it may be possible for those courses to be incorporated into the regular departmental program, a fact that can provide encouragement to rather than competition with traditional approaches to second language acquisition.

The operation of a supervised, individualized-instructional program at the introductory level will make it possible to extend the capacity of high quality language instruction which because of low demand and high associated costs could not otherwise be offered. The key to the success of the MASTER Program will be the high degree of flexibility of the course syllabus (see Appendix L). This flexibility can easily meet the varying yearly demands for language instruction without having to make long-term financial commitments (hiring additional faculty and so forth).

In addition, the flexibility of the program can meet the demands of individual learners because the methodology is dependent neither on a fixed class schedule nor on fixed class laboratory schedules. Although most studies on the effectiveness of one method of learning a language over another are ambiguous, this practicum does present evidence to support the claim that in the introductory phases at least, it is important to separate the skills of listening comprehension (and reading) from those of speaking (and writing). The MASTER Program proposes to separate these skills and emphasize first one and then the other, thereby the skills and knowledge can be more efficiently learned.

The more clearly and precisely the MASTER Program can identify and state these goals in terms of performance objectives, the easier the task of incorporating the program in the existing curriculum. For the beginning phases of language learning these objectives are quite clear. Unfortunately, at this point in curriculum development, the objectives of higher levels of performance will remain somewhat vague until further research can be carried out.

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APPENDIX A

SOCIO-TOPICAL MATRIX

This appendix summarizes socio-topical data for professional and career fields. The socio-topical information is classified in functions and categories including brief comments on the need to understand, read, write, and speak the language. The comments are followed by the symbols (+), (o), and (-) indicating the degree of importance of the language requirements to the respective categories. The summary is supplemented by a socio-topical matrix to facilitate ease in manipulating the data.

It should be said, however, that the classification and matrix are not an analysis of the needs and objectives of training within each career field concerned. The data presented here are hypothetical constructs that should be confirmed or invalidated through curriculum design and development, and the conduct and evaluation of the teaching-learning process.

Code	Function or Category
01	Executive. Directors, managers, and senior executives. Involves broad executive level responsibility for the operation of a major project, program or functional area.

Comments: Persons in this category plan, organize, coordinate and direct the activities of companies, institutions, and public and private organizations. General managers, project managers, production managers, research and development managers, sales managers, administrative managers, works managers and personnel managers are nearly all attached to the executive function.

Language Requirements:

Understanding	- Will be required to understand a language of everday communication and a specialized language relating to the fields concerned. (/)
Speaking	- Will be required to speak a language of everyday communication and a specialized language relating to the fields concerned. (/)
Reading	- Will be required to read documentary information in connection with the fields concerned. (/)
Writing	- Will be required to write letters and draft documents in connection with the fields concerned. (o)

Code	Function or Category
02	Management. Managers (normally second or higher level of supervision). Involves management responsibilities for planning, directing, monitoring, and controlling activities to achieve current and future objectives of the organization according to established policy and directives. Develops and recommends specialized policy directly to an executive that may affect the operation of a division or project.

Comments: Persons in this category are required to apply management decisions of the organization under the direction of senior executive officials. They carry out their activities in the same sectors as these officials.

Language Requirements:

Understanding - Will be required to understand a language of communication of a high standard and a fairly specialized language. (/)

Speaking - Must be able to speak a language of communication of a high standard and a fairly specialized language. (/)

Reading - Must be able to read written documents in connection with the activities concerned. (/)

Writing - Must be able to draft reports and assume responsibility for correspondence. (/)

Code	Function or Category
03	Supervision. Normally first level supervision which directs activity performance with responsibility for planning, scheduling, and administering associated activities in accord with established policy, directives, and guidance.

Comments: Persons belonging to this category organize and direct the daily work of technical or administrative employees in public or private establisments. The need for language proficiency varies according to the nature of the organization.

Language Requirements:

Understanding	- Will be required to understand a language of everyday communication and a specialized language, according to the nature of the organization. (o)
Speaking	- Will be required to understand a language of everyday communication and a specialized language, in order to give instructions or transact business. (o)
Reading	- Will be required to read written documents in connection with the fields concerned for the purpose of supervising the work performed by subordinates. (/)
Writing	- Will be required to draft reports or write letters. (o)

Code Function or Category

04 Planning or Forecasting. Determine future activity and/or requirements and action necessary to respond to future events.

Comments: The occupations of personnel in this category are likely to be extremely varied, ranging from fundamental research to practical analysis and application of their findings in the fields of administration and data processing.

Language Requirements:

Understanding - May be required to undertake surveys and systems analyses at international level. Need for a language of everyday communication in addition to a specialized language. (o)

Speaking - See above. Need for a language of everyday communication in addition to a specialized language. (o)

Reading - Will be required to read papers, articles, reports and schedules dealing with problems in connection with the fields concerned. (/)

Writing - May be required to draft reports, schedules or investigations. Need for a specialized language. (o)

Code	Function or Category
05	Systems. Integrate theory, equipment, and environment to create and optimize major technical or administrative concepts.

Comments: Persons in this category carry out research and develop practical application for the purpose of improving the efficiency of operations. Their activities may be conducted more and more at the international level.

Language Requirements:

Understanding	- May be called upon to act as advisers or consultants or to carry out market research at international level. Will be required to understand a language of everyday communication in addition to a specialized language. (o)
Speaking	- See above. Will be required to speak a language of everyday communication in addition to a specialized language. (o)
Reading	- Will be required to read papers, articles and reports dealing with problems relating to the fields concerned. Need for a specialized vocabulary. (/)
Writing	- May be required to write reports. Need for a specialized language. (o)

Code	Function or Category
06	Design. Originate and/or develop components, products, or scientific engineering, or administative systems to specification. Evolve or improve techniques, procedures, systems or processes, services, or products through experience and scientific or academic knowledge.

Comments: Persons in this category conduct research in highly specialized sciences, and supply practical data for the design, development, and improvement of administrative and technical functions. They are often called upon as advisers to analyze human, social technical, and management problems and propose solutions.

Language Requirements:

Understanding	- Will be required to understand a language of everyday communication for the purposes of investigation and conversation. (o) - Will be required to understand a specialized language for the purpose of taking part in meetings, seminars, symposia, etc. (-)
Speaking	- See above. - Will be required to speak a language of everyday communication and a specialized language. (o)
Reading	- Will be required to read papers, articles and reports dealing with problems in connection with the field concerned. Need for a specialized language. (+)
Writing	- May be required to write reports, articles and enquiries in connection with the problems concerned. (-)

Code	Function or Category
07	Administration. Direct the consolidating, documenting, and preparing of data for administration, scheduling, forecasting, planning, evaluating, budgeting, and progress measurement of work.

Comments: Persons in this category prepare statements relating to financial and accouting operations pertaining to credit and debit transactions. With the increasing mobility of manpower, persons in this category deal with personnel problems on the departmental level, perform various office duties and write letters. Their need for proficiency in a language will depend on the function and size of the department or section for which they work.

Language Requirements:

Understanding	- Will be required to understand a language of everyday communication and a fairly specialized language (/)
Speaking	- Will be required to speak a language of everyday communication and a fairly specialized language. (o)
Reading	- Will be required to read letters and other texts in connection with the fields concerned. (/)
Writing	- Will be required to write letters or texts such as, standard practice instructions and operating procedures. (/)

Code	Function or Category
08	Dispatch, Control, or Assign Work. Determine scheduling, measuring, or evaluating the progress of work.

Comments: Persons in this category direct, supervise, and inspect operations in transport, communication services, and coordinate and direct mission related activities on the behalf of first level supervision.

Language Requirements:

Understanding	- Will be required to understand a language of everyday communication and a fairly specialized language. (/)
Speaking	- Will be required to speak a language of everyday communication and a fairly specialized language in order to give orders and instructions. (/)
Reading	- Will be required to read written documents in connection with the activities concerned. Need for a fairly specialized language (/)
Writing	- Will be required to draft reports and other documents in connection with the activities concerned. (/)

Code	Function or Category
09	Maintenance Service or Repair. Prolong the worth and operation of existing processes, methods, techniques, facilities, equipment, or operating procedures.

Comments: Workers in this category are generally highly specialized in a particular branch of operations and maintenance (O&M). They carry out practical applications based on pure and applied research into preventive maintenance and related fields.

Language Requirements:

Understanding	- Will be required to understand a specialized language. (-)
Speaking	- Will be required to communicate with colleagues. Need for a language of everyday communication in addition to a specialized language. (-)
Reading	- Will be required to read procedures, schematics, and reports dealing with problems connected with the fields concerned. (+)
Writing	- Will be required to write instructions on subjects associated with the fields concerned. (-)

Code	Function or Category
10	Installation, Fabrication, or Construction. Assemble materials or components to form a component, system, or facility according to design or place a previously designed component, product, or scientific/administrative system into operation.

Comments: Workers in this category are generally specialized in a particular branch of research and development (R&D). They carry out practical applications based on systems analysis and design in the scientific, technical/administrative fields.

Language Requirements:

Understanding	- Will be required to understand a specialized language. (-)
Speaking	- Will be required to communicate with colleagues. Need for a language of everyday communication in addition to a specialized language. (-)
Reading	- Will be required to read procedures, schematics, and reports dealing with problems connected with the fields concerned. (+)
Writing	- Will be required to write instructions on subjects associated with the fields concerned. (-)

Code	Function or Category
11	Test, Check, Inspect, Audit, or Inventory. Examine or perform decisive trial of technical or administrative characteristics, quality, or adequacy of records, systems, or components.

Comments: Workers in this category are generally specialized in a particular branch of quality control, evaluation, and assurance. They carry out practical functions based on standard operating or administrative procedures and processes.

Persons in this category may assist or provide overall assistance and operating support to a principal performing or responsible for the activity. For example, workers operating automatic machines which process scientific, technical, commercial and other data, and persons responsible for sorting, registering, and distribution of data.

Language Requirements:

Understanding	- Will be required to understand a specialized language. (-)
Speaking	- Will be required to communicate with colleagues. Need for a language of everyday communication in addition to a specialized language. (-)
Reading	- Will be required to read procedures, schedules, operating instructions, and reports dealing with problems connected with the fields concerned. (/)
Writing	- Will be required to write instructions on subjects associated with the fields concerned. (-)

Code Function or Category

12 Instruct or Train. Teach others.

Comments: Teachers in this unit category are generally specialists in particular fields. They conduct classes, deliver lectures, direct the work of students and do research.

This category includes teachers who conduct classes in foreign languages and who need to remain in direct, regular contact with the language they teach and the culture associated with it. They must, or course, master fully the four aptitudes, hence the need for permanent training and further training, in particular in phonetics, and also in natural, everyday conversation.

Language Requirements:

Understanding	- Participation in congresses, seminars, symposia and lecture tours. Will be required to understand a specialized language. (/)
Speaking	- See above. Will be required to communicate with colleagues, using a specialized language and a language of everyday communication. (/)
Reading	- Will be required to read papers, and articles/reports in connection with problems relating to the disciplines concerned. Need for a specialized vocabulary. (/)
Writing	- May be required to write articles, papers or letters. Need for a specialized language. (/)

Code	Function or Category
13	Writing, Editing. Translate knowledge into formal documentation designed to instruct, guide or educate others.

Comments: Persons belonging to this unit category are required to collect, edit, report and prepare information for publication in newspapers, periodicals, or technical manuals. They may be authors, critics, journalists (various specialized fields) or publishers who carry on their activities increasingly at the international level. Although their professions seldom require them to write or speak the foreign language as a native, they must be able to understand it and read it for the process of translation or gathering information.

Language Requirements:

Understanding - May be required to understand a specialized language. (-)

Speaking - May be required to speak a specialized language. (-)

Reading - Will be required to read documents in connection with the field concerned.
Need for a specialized language. (+)

Writing - Will be required to draft texts in connection with the fields concerned.
Need for a specialized language. (o)

Code	Function or Category
14	Graphics. Layout and design, illustrating, artistic rendering, graphic arts skills, and preparing visual aids and technical exhibits.

Comments: The occupations of persons in this category are very varied: design and preparation of drawings and media supervision; and preparation of drawings for R&D and O&M.

Language Requirements:

Understanding	- Will be required to understand a language of everyday communication and a language of artistic expression or a specialized language. (+)
Speaking	- May be required to communicate in a foreign language with colleagues to discuss business or define a situation. (-)
Reading	- Will be required to read any document written in a literary language or specialized language, and to understand all shades of meaning for graphic presentation. (+)
Writing	- May be required to write letters. Need for a language of everyday communication. (-)

RECURRING DATA ANALYSIS

1. SUBJECT OF ANALYSIS OR ACTIVITY:

SOCIO-TOPICAL MATRIX
FOR CAREER FIELDS
CROSS-REFERENCED
TO FUNCTIONS OR
CATEGORIES

2. ANALYZED BY: H.E. Branham, Jr.

3. DATE: 24 Nov

FUNCTIONS AND CATEGORIES

NO.	CAREER FIELDS	No. 1 EXECUTIVE	No. 2 MANAGEMENT	No. 3 SUPERVISION	No. 4 PLANNING OR FORECASTING	No. 5 SYSTEMS	No. 6 DESIGN	No. 7 ADMINISTRATION	No. 8 DISPATCH, CONTROL, OR ASSIGN WORK	No. 9 MAINTENANCE SERVICE OR REPAIR	No. 10 INSTALLATION, FABRICATION, OR CONSTRUCTION	No. 11 TEST, CHECK, INSPECT, AUDIT, OR INVENTORY	No. 12 INSTRUCT OR TRAIN	No. 13 WRITING, EDITING	No. 14 GRAPHICS	TOTAL
010	PROJECT MANAGEMENT	X	X	X	X	X	X	X								
011	Administration		X	X	X			X								
012	Maintenance & Opns		X	X				X		X						
013	Engineering		X	X		X	X	X			X	X				
020	PERSONNEL/LABOR REL	X	X		X			X					X			
021	Employment		X	X	X			X	X							
022	Wage & Salary		X		X	X	X	X								
023	Labor Relations		X	X	X			X				X				
	TOTALS															

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024	Training		X	X	X	X	X	X				X	X			
025	Pension/Benefits		X		X		X	X				X				
026	EEO		X		X	X	X	X				X	X			
027	Records		X	X				X		X		X				
030	ACCOUNTING	X	X	X				X				X				
031	Payroll		X	X		X		X				X				
032	Cost		X	X	X	X		X				X				
033	General Books		X	X		X		X				X				
	TOTALS															

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034	Timekeeping		X	X		X		X				x				
035	Property Management		X	X	X	X		X	X	X	X	X				
036	Auditing		X	X		X		X				X				
040	PUBLIC RELATIONS	X	X	X	X	X	X	X					X	X		
050	DATA PROCESSING	X	X	X	X	X	X	X				X	X			
051	Management		X	X	X			X	X							
052	Systems Analysis		X	X	X	X	X	X			X	X	X			
	TOTALS															

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053	Business Programming		X	X	X	X	X	X	X		X	X	X	X	X	
054	Scientific Programming		X	X	X	X	X	X			X	X	X	X	X	
055	Data Communications		X	X		X		X		X		X				
056	Computer Operations		X	X	X	X		X	X	X	X	X	X			
057	Data Control		X	X		X		X				X				
058	Data Entry		X	X	X	X		X	X			X	X			
15																
	TOTALS															

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060	CONTRACTS	X	X	X	X	X	X	X			X	X		X		
061	Administration, Govt		X	X	X	X	X	X			X	X		X		
062	Tech Requirements		X	X	X	X	X	X			X	X				
063	Insurance		X	X	X			X								
064	Legal		X	X				X								
065	Budgeting/Pricing		X	X	X	X		X				X				
070	MEDICAL/DENTAL		X	X				X	X			X				
071	Administration		X	X				X								
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072	Professional		X	X	X			X				X	X			
073	Sub Professional			X	X				X			X				
074	Nursing			X	X				X			X	X			
075	Industrial Hygiene			X	X	X		X				X	X			
076	Life Support Systems			X	X	X	X	X	X	X	X	X	X			
080	ECONOMICS/MARKETING	X	X	X	X	X		X								
081	Develop/Promote		X	X	X	X	X	X				X	X			
082	Industrial		X	X	X			X			X	X				
	TOTALS															

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083	Proposal Preparation		X	X	X	X	X	X	X		X	X	X	X	X	
084	Sales		X	X	X			X			X		X			
090	MATERIAL	X	X	X	X			X								
091	Purchasing		X	X	X			X				X				
092	Provisioning		X	X	X			X			X	X				
093	Planning/Control		X	X	X	X	X	X	X	X	X	X				
094	Receiving/Shipping			X				X	X			X				
095	Storing/Issuing			X	X			X	X		X	X				
	TOTALS															

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100	MANAGEMENT SYSTEMS	X	X	X	X	X	X	X								
101	Organization Planning		X	X	X	X	X	X				X	X			
102	Manpower Planning		X	X	X	X	X	X	X			X	X			
103	Procedures		X	X	X	X	X	X	X		X	X	X	X	X	
104	Forms Control		X	X	X	X	X	X			X				X	
105	Logistic Plans		X	X	X			X		X	X	X				
106	Value Analysis		X	X		X	X	X				X				
110	OFFICE SERVICES		X	X				X			X	X			X	
	TOTALS															

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112	Reproduction/Printing			X	X			X	X						X	
113	Library Service			X	X	X	X	X			X	X				
114	Mail Distribution			X				X	X							
115	Classified Doc Control			X	X			X	X			X				
120	DOCUMENTATION SERVICES		X	X	X	X	X	X						X	X	
121	Graphic Arts			X			X	X			X		X		X	
122	Writing/Editing			X	X	X		X			X			X	X	
123	Photography			X	X	X	X	X			X				X	
	TOTALS															

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130	EDUCATION			X	X	X	X	X			X	X	X	X	X	
131	Administration			X	X	X		X	X		X	X				
133	Instruction		X	X	X	X	X	X	X		X	X	X	X	X	
140	AIRPORT MANAGEMENT		X	X	X	X		X	X	X		X				
141	International		X	X	X	X	X	X	X	X		X	X			
142	Domestic		X	X	X	X	X	X	X	X		X	X			
	TOTALS															

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150	AVIATION TRAINING		X	X	X	X		X	X			X	X			
151	Flight Crew			X	X											
152	Cabin Crew			X	X			X								
153	Aircraft/Ground Maint			X	X	X	X		X	X	X	X				
154	Airline Operations		X	X	X	X	X	X	X			X	X			
155	Passenger Service		X	X	X			X	X			X	X			
156	Cargo Service		X	X	X			X	X			X				
157	Catering			X	X			X				X				
	TOTALS															

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200	RANGE OPERATIONS	X	X	X	X	X	X	X	X							
201	Program Management		X	X	X	X	X	X			X	X				
202	Test Operations		X	X	X	X		X	X		X	X				
203	Range Scheduling		X	X	X	X		X	X			X	X			
204	Meteorological Svcs		X	X	X	X		X				X				
205	Launch Complexes			X		X		X	X	X	X	X				
210	PROPELLANTS			X	X			X	X		X	X				
211	Liquids			X	X	X		X	X		X	X				
	TOTALS															

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212	Solids			X	X	X		X	X		X	X				
213	Gases			X	X	X		X	X		X	X				
214	Nuclear		X	X	X	X		X	X		X	X	X			
215	Support Systems			X	X	X		X	X	X	X	X				
216	Transport			X	X			X	X							
220	ORDNANCE		X	X	X	X		X	X		X	X				
221	Armament			X	X	X	X	X	X		X	X				
222	Handling			X	X	X		X	X		X	X				
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223	Demolition			X	X				X			X	X			
224	Underwater			X	X	X		X	X		X	X				
225	Pyrotechnics			X	X	X		X	X		X	X				
230	HEAVY EQUIP OPERATIONS			X	X			X	X	X		X				
240	CONSTRUCTION MGMT		X	X	X	X		X			X	X				
250	ELECTRONIC EQUIP OPNS		X	X	X	X	X	X		X		X				
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260	FIRE/SECURITY			X				X	X			X	X			
261	Administration			X				X								
262	Investigation			X				X				X		X		
263	Police			X				X	X			X	X			
264	Fire Protection			X					X			X	X			
265	Pass & ID			X				X				X				
266	Aircraft/Airport Svcs		X	X	X			X	X	X		X				
267	Airport Security Svcs			X				X	X			X	X			
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270	SHOP SUPPORT			X				X	X	X	X	X				
271	Tool & Die			X					X	X	X	X				
272	Machine Shop			X					X	X	X	X				
273	Sheet Metal			X					X	X	X	X				
274	Installation Support			X					X	X	X	X				
275	Electric Shop			X					X	X	X	X				
280	INDUSTRIAL ENGINEERING		X	X	X	X		X				X	X	X	X	
281	Methods			X	X	X						X	X	X	X	
	TOTALS															

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282	Work Measurement		X		X	X	X		X		X	X	X		X	
283	Production Planning		X		X	X		X	X	X	X	X				
284	Industrial Operations			X	X	X		X	X	X		X				
285	Material Handling			X	X			X	X	X	X	X				
286	Space Layout			X	X	X	X					X				
287	Work Control		X	X	X	X		X	X	X	X	X				
288	Configuration Control		X		X	X	X			X	X	X				
	TOTALS															

RECURRING DATA ANALYSIS

1. SUBJECT OF ANALYSIS OR ACTIVITY:

SOCIO-TOPICAL MATRIX FOR CAREER FIELDS CROSS-REFERENCED TO FUNCTIONS OR CATEGORIES

2. ANALYZED BY: H. E. Branham, Jr.

3. DATE: 24 Nov

FUNCTIONS AND CATEGORIES

NO.	CAREER FIELDS	EXECUTIVE No. 1	MANAGEMENT No. 2	SUPERVISION No. 3	PLANNING OR FORECASTING No. 4	SYSTEMS No. 5	DESIGN No. 6	ADMINISTRATION No. 7	DISPATCH, CONTROL, OR ASSIGN WORK No. 8	MAINTENANCE SERVICE OR REPAIR No. 9	INSTALLATION, FABRICATION, OR CONSTRUCTION No. 10	TEST, CHECK, INSPECT, AUDIT, OR INVENTORY No. 11	INSTRUCT OR TRAIN No. 12	WRITING, EDITING No. 13	GRAPHICS No. 14	TOTAL
290	TRANSPORTATION		X	X	X			X	X	X		X				
291	Ground		X	X	X			X	X	X		X				
292	Air		X	X	X			X	X	X		X				
293	Marine		X	X	X			X	X	X		X				
300	AIRCRAFT GROUND MAINT			X	X					X	X	X				
301	Avionics Maint & Rep			X	X					X	X	X				
302	Airframe Maint & Rep			X	X					X	X	X				
303	Powerplant Maint & Rep			X	X					X	X	X				
	TOTALS															

RECURRING DATA ANALYSIS

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SOCIO-TOPICAL MATRIX
FOR CAREER FIELDS
CROSS-REFERENCED
TO FUNCTIONS OR
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3. DATE: 24 Nov

FUNCTIONS AND CATEGORIES

NO.	CAREER FIELDS	EXECUTIVE No. 1	MANAGEMENT No. 2	SUPERVISION No. 3	PLANNING OR FORECASTING No. 4	SYSTEMS No. 5	DESIGN No. 6	ADMINISTRATION No. 7	DISPATCH, CONTROL, OR ASSIGN WORK No. 8	MAINTENANCE SERVICE OR REPAIR No. 9	INSTALLATION, FABRICATION, OR CONSTRUCTION No. 10	TEST, CHECK, INSPECT, AUDIT, OR INVENTORY No. 11	INSTRUCT OR TRAIN No. 12	WRITING, EDITING No. 13	GRAPHICS No. 14	TOTAL
304	Accessory Maint & Rep			X	X					X	X	X				
305	General Equip Maint			X	X					X	X	X				
306	Quality Control		X	X		X	X					X				
310	METAL FABRICATION			X			X			X	X	X				
320	MECHANICAL SERVICES			X				X	X	X	X	X				
	TOTALS															

RECURRING DATA ANALYSIS

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FOR CAREER FIELDS
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3. DATE: 24 Nov

FUNCTIONS AND CATEGORIES

NO.	CAREER FIELDS	EXECUTIVE No. 1	MANAGEMENT No. 2	SUPERVISION No. 3	PLANNING OR FORECASTING No. 4	SYSTEMS No. 5	DESIGN No. 6	ADMINISTRATION No. 7	DISPATCH, CONTROL, OR ASSIGN WORK No. 8	MAINTENANCE SERVICE OR REPAIR No. 9	INSTALLATION, FABRICATION, OR CONSTRUCTION No. 10	TEST, CHECK, INSPECT, AUDIT, OR INVENTORY No. 11	INSTRUCT OR TRAIN No. 12	WRITING, EDITING No. 13	GRAPHICS No. 14	TOTAL
330	QUALITY ASSURANCE		X	X	X	X	X	X	X	X	X	X				
331	Mechanical Systems			X		X	X		X	X	X	X				
332	Electrical/Electronic			X		X	X		X	X	X	X				
333	Load Testing			X					X	X	X	X				
334	Structural			X		X	X		X	X	X	X				
340	BASE SUPPORT		X	X	X			X	X	X	X	X				
341	Water/Sewage			X	X			X	X	X	X	X				
342	Roads/Grounds			X	X			X	X	X	X	X				
	TOTALS															

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FOR CAREER FIELDS
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3. DATE: 24 Nov

		FUNCTIONS AND CATEGORIES														
NO.	CAREER FIELDS	EXECUTIVE No. 1	MANAGEMENT No. 2	SUPERVISION No. 3	PLANNING OR FORECASTING No. 4	SYSTEMS No. 5	DESIGN No. 6	ADMINISTRATION No. 7	DISPATCH, CONTROL, OR ASSIGN WORK No. 8	MAINTENANCE SERVICE OR REPAIR No. 9	INSTALLATION, FABRICATION, OR CONSTRUCTION No. 10	TEST, CHECK, INSPECT, AUDIT, OR INVENTORY No. 11	INSTRUCT OR TRAIN No. 12	WRITING, EDITING No. 13	GRAPHICS No. 14	TOTAL
343	Facilities Maint		X	X		X		X	X	X	X	X				
344	Electric Distribution			X		X			X			X				
345	Landscaping			X			X		X							
346	Environmental Control			X		X		X	X	X		X				
350	BASE OPERATIONS		X	X	X	X		X	X	X	X	X	X			
351	Administration			X				X				X	X	X	X	
352	Food Services			X	X			X	X			X				
353	Housing/Laundry			X	X			X	X			X				
	TOTALS															

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FUNCTIONS AND CATEGORIES

NO.	CAREER FIELDS	No. 1 EXECUTIVE	No. 2 MANAGEMENT	No. 3 SUPERVISION	No. 4 PLANNING OR FORECASTING	No. 5 SYSTEMS	No. 6 DESIGN	No. 7 ADMINISTRATION	No. 8 DISPATCH, CONTROL, OR ASSIGN WORK	No. 9 MAINTENANCE SERVICE OR REPAIR	No. 10 INSTALLATION, FABRICATION, OR CONSTRUCTION	No. 11 TEST, CHECK, INSPECT, AUDIT, OR INVENTORY	No. 12 INSTRUCT OR TRAIN	No. 13 WRITING, EDITING	No. 14 GRAPHICS	TOTAL
354	Custodial Services			X	X			X	X			X				
355	Movie Projectionist			X	X			X				X				
360	MILITARY SERVICE		X	X	X	X	X	X				X	X			
361	Administration			X	X			X				X	X	X	X	
362	Logistics Support			X	X			X	X			X				
363	Combat Support			X	X	X		X	X	X	X	X	X			
364	R&D		X	X	X	X	X	X			X	X	X			
	TOTALS															

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RECURRING DATA ANALYSIS

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3. DATE: 24 Nov

FUNCTIONS AND CATEGORIES

NO.	CAREER FIELDS	EXECUTIVE No. 1	MANAGEMENT No. 2	SUPERVISION No. 3	PLANNING OR FORECASTING No. 4	SYSTEMS No. 5	DESIGN No. 6	ADMINISTRATION No. 7	DISPATCH, CONTROL, OR ASSIGN WORK No. 8	MAINTENANCE SERVICE OR REPAIR No. 9	INSTALLATION, FABRICATION, OR CONSTRUCTION No. 10	TEST, CHECK, INSPECT, AUDIT, OR INVENTORY No. 11	INSTRUCT OR TRAIN No. 12	WRITING, EDITING No. 13	GRAPHICS No. 14	TOTAL
370	SAFETY		X	X	X	X	X	X				X	X			
371	Industrial			X	X			X				X	X	X		
372	Pad			X	X	X	X	X	X			X	X			
373	Launch Operations		X	X	X	X		X	X			X	X	X		
374	Submarine Operations		X	X	X	X		X	X			X	X	X		
375	Liquid/Cryogenics Prop			X	X	X		X	X		X	X				
376	High Pressure Gas			X	X	X		X	X		X	X				
377	Explosive/Ordnance			X	X	X		X	X		X	X				
	TOTALS															

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3. DATE: 24 Nov

FUNCTIONS AND CATEGORIES

NO.	CAREER FIELDS	No. 1 EXECUTIVE	No. 2 MANAGEMENT	No. 3 SUPERVISION	No. 4 PLANNING OR FORECASTING	No. 5 SYSTEMS	No. 6 DESIGN	No. 7 ADMINISTRATION	No. 8 DISPATCH, CONTROL, OR ASSIGN WORK	No. 9 MAINTENANCE SERVICE OR REPAIR	No. 10 INSTALLATION, FABRICATION, OR CONSTRUCTION	No. 11 TEST, CHECK, INSPECT, AUDIT, OR INVENTORY	No. 12 INSTRUCT OR TRAIN	No. 13 WRITING, EDITING	No. 14 GRAPHICS	TOTAL
380	AIRLINE OPERATIONS I		X	X	X	X		X	X	X		X				
381	Reservations Control			X	X			X	X					X		
382	Equipment Utilization			X	X			X	X	X		X				
383	Ramp Operations			X	X			X	X	X		X				
384	Flight Operations Admin		X	X	X	X		X	X	X	X	X	X	X		
385	Air Traffic Control			X	X			X	X			X	X			
386	Tower Operations			X	X			X	X			X	X			
387	Flight Planning & Sched			X	X			X	X				X	X		
388	Flight Dispatch			X	X			X	X				X			
	TOTALS															

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FUNCTIONS AND CATEGORIES

NO.	CAREER FIELDS	EXECUTIVE No. 1	MANAGEMENT No. 2	SUPERVISION No. 3	PLANNING OR FORECASTING No. 4	SYSTEMS No. 5	DESIGN No. 6	ADMINISTRATION No. 7	DISPATCH, CONTROL, OR ASSIGN WORK No. 8	MAINTENANCE SERVICE OR REPAIR No. 9	INSTALLATION, FABRICATION, OR CONSTRUCTION No. 10	TEST, CHECK, INSPECT, AUDIT, OR INVENTORY No. 11	INSTRUCT OR TRAIN No. 12	WRITING, EDITING No. 13	GRAPHICS No. 14	TOTAL
390	AIRLINE OPERATIONS II		X	X	X	X		X	X	X		X				
391	Crew Planning & Sched			X	X				X				X			
392	Passenger & Cargo Sales			X	X	X	X	X								
393	Passenger Processing			X	X			X	X			X				
394	Cargo & Mail Processing			X	X			X	X			X				
396	Technical Assistance			X	X	X	X	X	X	X	X	X	X			
397	Aircraft Engineering			X	X	X	X	X				X				
398	Marketing Analysis		X	X	X		X	X				X	X	X		
	TOTALS															

RECURRING DATA ANALYSIS

FUNCTIONS AND CATEGORIES

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NO.	CAREER FIELDS	No. 1 EXECUTIVE	No. 2 MANAGEMENT	No. 3 SUPERVISION	No. 4 PLANNING OR FORECASTING	No. 5 SYSTEMS	No. 6 DESIGN	No. 7 ADMINISTRATION	No. 8 DISPATCH, CONTROL, OR ASSIGN WORK	No. 9 MAINTENANCE SERVICE OR REPAIR	No. 10 INSTALLATION, FABRICATION, OR CONSTRUCTION	No. 11 TEST, CHECK, INSPECT, AUDIT, OR INVENTORY	No. 12 INSTRUCT OR TRAIN	No. 13 WRITING, EDITING	No. 14 GRAPHICS	TOTAL
500	COMMUNICATIONS SYSTEMS		X	X	X	X	X	X	X	X						
501	RF			X	X	X			X			X				
502	Video			X	X	X	X		X	X	X	X				
503	Audio			X	X	X	X		X	X	X	X				
504	Inside Plant			X		X		X				X				
505	Outside Plant			X		X		X	X	X	X	X	X			
506	Secure Comm Systems		X	X	X	X		X	X			X	X	X		
507	Microwave/Satellite Sys			X	X	X				X		X				
508	Digital Trans Systems			X	X	X				X		X				
	TOTALS															

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NO.	CAREER FIELDS	EXECUTIVE No. 1	MANAGEMENT No. 2	SUPERVISION No. 3	PLANNING OR FORECASTING No. 4	SYSTEMS No. 5	DESIGN No. 6	ADMINISTRATION No. 7	DISPATCH, CONTROL, OR ASSIGN WORK No. 8	MAINTENANCE SERVICE OR REPAIR No. 9	INSTALLATION, FABRICATION, OR CONSTRUCTION No. 10	TEST, CHECK, INSPECT, AUDIT, OR INVENTORY No. 11	INSTRUCT OR TRAIN No. 12	WRITING, EDITING No. 13	GRAPHICS No. 14	TOTAL
509	Computers/Switiching			X	X	X	X	X	X			X				
510	TELEMETRY SYSTEMS			X	X	X	X	X	X	X		X				
511	Antennas and Feed Elec			X	X	X				X	X	X				
512	Servos and Drives			X	X	X				X	X	X				
513	Multicouplers/Recievers			X	X	X				X	X	X				
514	Wideband Mag Tape Rec			X	X	X				X	X	X				
515	Time/Frequence Division			X	X	X				X	X	X				
516	Computers and Displays			X	X	X	X	X	X	X	X	X				
	TOTALS															

RECURRING DATA ANALYSIS

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FUNCTIONS AND CATEGORIES

NO.	CAREER FIELDS	No. 1 EXECUTIVE	No. 2 MANAGEMENT	No. 3 SUPERVISION	No. 4 PLANNING OR FORECASTING	No. 5 SYSTEMS	No. 6 DESIGN	No. 7 ADMINISTRATION	No. 8 DISPATCH, CONTROL, OR ASSIGN WORK	No. 9 MAINTENANCE SERVICE OR REPAIR	No. 10 INSTALLATION, FABRICATION, OR CONSTRUCTION	No. 11 TEST, CHECK, INSPECT, AUDIT, OR INVENTORY	No. 12 INSTRUCT OR TRAIN	No. 13 WRITING, EDITING	No. 14 GRAPHICS	TOTAL
517	Displays			X	X	X				X	X	X				
518	Reformat & Retransmit			X	X			X	X			X				
519	Distribute & Switch			X	X			X	X			X				
520	RADAR SYSTEMS		X	X	X	X	X	X	X			X				
521	Antennas and Feed Elec			X	X	X				X	X	X				
522	Servos, Drives, and En			X	X	X				X	X	X				
523	Receivers, Transmitters			X	X	X				X	X	X				
524	Ranging			X	X	X				X	X	X				
	TOTALS															

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525	Consoles/Mode Switching			X	X	X	X	X		X	X	X				
526	Recorders/Computers			X	X	X		X		X	X	X				
527	Displays			X	X	X				X	X	X				
528	Beacon/Beacon Phasing			X	X	X				X	X	X				
529	Signature Data			X	X	X		X		X	X	X				
530	TIMING SYSTEMS			X	X	X		X	X			X				
531	Oscillators			X	X	X			X	X	X	X				
532	Standard-Cesium			X	X	X			X	X	X	X				
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533	Calibration			X	X	X		X	X	X		X				
534	Displays			X	X	X				X	X	X				
535	Timing Codes			X	X	X		X				X	X			
536	Distribution			X	X	X		X	X			X				
537	Receivers			X	X	X				X	X	X				
538	Transmitters			X	X	X				X	X	X				
539	Countdown/Sequencers			X	X	X		X	X	X	X	X				
540	COMMAND SYSTEMS		X	X	X	X	X	X	X			X				
	TOTALS															

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541	RF			X	X	X				X	X	X				
542	Antennas			X	X	X				X	X	X				
543	Transmitters			X	X	X				X	X	X				
544	Switching			X	X	X		X	X	X	X	X				
545	Coding/Decoding			X	X			X	X			X	X			
546	Receivers			X	X	X				X	X	X				
547	Recorders			X	X	X				X	X	X				
550	NAVIGATION SYSTEMS		X	X	X	X		X	X			X				
	TOTALS															

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		FUNCTIONS AND CATEGORIES														
		EXECUTIVE	MANAGEMENT	SUPERVISION	PLANNING OR FORECASTING	SYSTEMS	DESIGN	ADMINISTRATION	DISPATCH, CONTROL, OR ASSIGN WORK	MAINTENANCE SERVICE OR REPAIR	INSTALLATION, FABRICATION, OR CONSTRUCTION	TEST, CHECK, INSPECT, AUDIT, OR INVENTORY	INSTRUCT OR TRAIN	WRITING, EDITING	GRAPHICS	TOTAL
NO.	CAREER FIELDS	No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7	No. 8	No. 9	No. 10	No. 11	No. 12	No. 13	No. 14	
551	Inertial			X	X	X			X			X				
552	Satellite			X	X	X		X	X			X				
553	Ranging Systems			X	X	X				X	X	X				
554	Hyperbolic			X	X	X				X	X	X				
555	Transponders			X	X	X				X	X	X				
556	Celestial			X	X	X		X	X			X				
557	Doppler Velocimeters			X	X	X				X	X	X				
558	Radio Aids to Navigate			X	X	X	X	X	X			X				
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560	DATA SYSTEMS		X	X	X	X	X	X	X			X				
561	Computers and Peripher			X	X	X	X		X			X				
562	Data Handling and Trans			X	X	X			X	X	X	X				
563	Displays			X	X	X				X	X	X				
564	Recorders			X	X	X				X	X	X				
565	I/O, Switching & Cont			X	X	X				X	X	X				
566	Programming			X	X	X	X	X	X				X	X		
570	METEOROLOGY SYSTEMS		X	X	X	X		X	X			X	X			
	TOTALS															

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571	Environmental Sensors			X	X	X		X				X				
572	Signal Cond/Conv			X	X	X						X				
573	Data Transmission			X	X	X		X	X			X				
574	Computer Interfaces		X	X	X	X	X	X	X			X				
575	Weather Radars			X	X	X		X	X			X				
576	Meteo Sounding Systems			X	X	X		X				X	X			
577	Electric Field Int Det			X	X	X				X	X	X				
580	MECHANICAL			X	X			X	X	X	X	X				
	TOTALS															

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3. DATE: 24 Nov

FUNCTIONS AND CATEGORIES

NO.	CAREER FIELDS	No. 1 EXECUTIVE	No. 2 MANAGEMENT	No. 3 SUPERVISION	No. 4 PLANNING OR FORECASTING	No. 5 SYSTEMS	No. 6 DESIGN	No. 7 ADMINISTRATION	No. 8 DISPATCH, CONTROL, OR ASSIGN WORK	No. 9 MAINTENANCE SERVICE OR REPAIR	No. 10 INSTALLATION, FABRICATION, OR CONSTRUCTION	No. 11 TEST, CHECK, INSPECT, AUDIT, OR INVENTORY	No. 12 INSTRUCT OR TRAIN	No. 13 WRITING, EDITING	No. 14 GRAPHICS	TOTAL
581	Servo Systems & Drives			X	X	X				X	X	X				
582	Thermodynamics			X	X	X				X	X	X				
583	Hydraulics			X	X	X				X	X	X				
584	Materials/Fab/Structure			X	X	X	X			X	X	X				
585	Refrigeration/AC			X	X	X				X	X	X				
586	Cryogenics			X	X	X				X	X	X				
587	Corrosion Control			X	X	X				X		X				
588	Marine			X	X	X	X	X		X		X				
589	Ground Support			X	X	X	X	X	X	X		X				
	TOTALS															

RECURRING DATA ANALYSIS

1. SUBJECT OF ANALYSIS OR ACTIVITY:

SOCIO-TOPICAL MATRIX
FOR CAREER FIELDS
CROSS-REFERENCED
TO FUNCTIONS OR
CATEGORIES

2. ANALYZED BY: H. E. Branham, Jr.

3. DATE: 24 Nov

FUNCTIONS AND CATEGORIES

NO.	CAREER FIELDS	EXECUTIVE No. 1	MANAGEMENT No. 2	SUPERVISION No. 3	PLANNING OR FORECASTING No. 4	SYSTEMS No. 5	DESIGN No. 6	ADMINISTRATION No. 7	DISPATCH, CONTROL, OR ASSIGN WORK No. 8	MAINTENANCE SERVICE OR REPAIR No. 9	INSTALLATION, FABRICATION, OR CONSTRUCTION No. 10	TEST, CHECK, INSPECT, AUDIT, OR INVENTORY No. 11	INSTRUCT OR TRAIN No. 12	WRITING, EDITING No. 13	GRAPHICS No. 14	TOTAL
590	OPTICS		X	X	X	X		X	X	X	X	X				
591	Geometric Optics			X	X	X	X			X	X	X				
592	Physical Optics			X	X	X	X			X	X	X				
593	Cameras			X	X				X	X	X	X				
594	Projectors			X	X				X	X	X					
595	Photographic Materials			X	X					X	X	X				
596	Lasers			X	X	X	X			X	X	X				
597	Exposure Controls			X	X					X	X	X				
598	Tracking Systems			X	X	X	X	X	X	X	X	X	X			
	TOTALS															

RECURRING DATA ANALYSIS

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600	DRAFTING		X	X	X	X	X	X	X			X	X	X	X	
601	Mechanical			X	X	X	X		X			X		X	X	
602	Electrical			X	X	X	X		X			X		X	X	
603	Architectural			X	X	X	X		X			X		X	X	
604	Isometric			X	X	X	X		X			X		X	X	
610	ELECTRICAL ENGINEERING		X	X		X	X		X	X	X	X				
620	CIVIL & ARCHITECTURAL		X	X		X	X		X	X	X	X				
	TOTALS															

RECURRING DATA ANALYSIS

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FUNCTIONS AND CATEGORIES

NO.	CAREER FIELDS	EXECUTIVE No. 1	MANAGEMENT No. 2	SUPERVISION No. 3	PLANNING OR FORECASTING No. 4	SYSTEMS No. 5	DESIGN No. 6	ADMINISTRATION No. 7	DISPATCH, CONTROL, OR ASSIGN WORK No. 8	MAINTENANCE SERVICE OR REPAIR No. 9	INSTALLATION, FABRICATION, OR CONSTRUCTION No. 10	TEST, CHECK, INSPECT, AUDIT, OR INVENTORY No. 11	INSTRUCT OR TRAIN No. 12	WRITING, EDITING No. 13	GRAPHICS No. 14	TOTAL
630	CHEMICAL ENGINEERING		X	X	X	X		X	X			X		X		
640	NUCLEAR ENGINEERING		X	X	X	X		X	X			X		X		
650	AERONAUTICAL ENGINEER		X	X	X	X		X	X			X		X		
660	MATHEMATICS			X	X	X	X	X				X	X	X	X	
670	PHYSICS			X	X	X	X	X				X	X	X	X	
	TOTALS															

221

171

22

RECURRING DATA ANALYSIS

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680	SURVEYING		X	X	X	X	X	X	X			X	X	X	X	
681	Geodetic			X	X	X	X		X			X		X	X	
682	Marine			X	X	X	X		X			X		X	X	
690	EARTH SCIENCES		X	X	X	X	X					X	X	X	X	
700	HYDRO ENGINEERING		X	X	X	X	X		X			X		X		
	TOTALS															

APPENDIX B

FRENCH LANGUAGE RULES

DESCRIPTION OF FRENCH RULES

In French, nouns are marked for gender and number by one of six different kinds of forms which precede them. Traditionally, these are called:

a. Definite articles.
b. Indefinite articles.
c. Cardinal numbers.
d. Demonstrative adjectives.
e. Possessive adjectives.
f. Indefinite adjectives.

We group them together syntactically under the label *noun markers*. In fact, a noun can be defined as any single form which is preceded by one of these noun-markers.

Rule 1 - Definite Articles

The French definite article that corresponds to English 'the' has several shapes: definite articles le, la, l', les.

Singular

le occurs in front of some French singular nouns that begin with a consonant:

le restaurant	the restaurant
le frère	the brother

la occurs in front of all other French sinular nouns that begin with a consonant:

la rue	the street
la soeur	the sister

These two shapes do not occur indiscriminately, i.e., 'connaissance' can be preceded only by *la* and never by *le* and 'restaurant' only by *le* and never by *la*. This permits classification of all French nouns into two classes, called genders, which play a major role in French grammar. Although most nouns do not refer to sex at all, the two noun classes are traditionally labelled masculine for *le* and feminine for *la*.

l' occurs in front of French singular nouns that begin with a vowel and is pronounced as part of the first syllable of those nouns.

l'ami	(la-mi)	the friend
l'enfant	(len-fant)	the child

This does not mean that a noun that begins with a vowel is neither masculine nor feminine, but simply that there is no distinctive mark of gender present in the definite article preceding it.

Plural

les occurs in front of French plural nouns:

les parents	the parents
les amis	the friends

Remember: When *les* is followed by a noun beginning with a vowel, the *s* of *les* is pronounced like a *z* at the beginning of that word.

Singular	Plural
Violà la porte.	Violà les portes.
Voilà la classe.	Voilà les classes.
Voilà le livre.	Violà les livres.
Voilà le restaurant.	Voilà les restaurants.
Voilà l'ami.	Voilà les amis.
Voilà l'enfant.	Voilà les enfants.

Rule 2 - Subject Pronouns

A French verb is usually preceded by a noun or by one of a set of short, unstressed forms which we will define as subject pronouns. These pronouns often refer back to some person or thing previously mentioned or indicated. The subject pronouns must be followed by or preceded by a verb. This provides a handy way, incidentally, of identifying verbs. The forms are:

	je	I
	nous	we
Singular	il (m)	he
	elle (f)	she
	on (m.f.)	one, we, people
Plural	ils (m)	they
	elles (f)	

Remember: Before a verb beginning with a vowel, the first person pronoun *je* is spelled *j'* and it is pronounced with the first syllable of the verb.

j'espère	I hope

The choice of the appropriate pronoun for the third personal plural may cause difficulty. The concept is: *elles* marks plural when all the people or things referred to are feminine. *ils* marks plural in all other cases.

Vos soeurs sont près d'ici.	Your sisters are nearby.
Elles sont près d'ici.	They are nearby.
Les parents sont en vacances.	The parents are on vacation.
Ils sont en vacances.	They are on vacation.
Marie, Anne et Janine sont au restaurant.	Marie, Anne and Janine are at the restaurant.
Elles sont au restaurant.	They are at the restaurant.
Marie, Anne, Janine et Pierre sont à Paris.	Marie, Anne, Janine and Pierre are in Paris.
Ils sont à Paris.	They are in Paris.

Rule 3 - Inversion Questions

There are several ways of formulating questions in French. One way is to reverse the positions of the subject pronoun (sp) and the verb. This process is called inversion:

Vous avez des nouvelles.	Avez-vous des nouvelles?
Ils sont en vacances.	Sont-ils en vacances?
Il est à Lyon maintenant.	Est-il à Lyon maintenant?
Nous allons au café.	Allons-nous au cafe?

Note that when the third person singular ends with a vowel, a 't' is added between the verb and the pronoun.

Il va bien.	Va-t-il bien?

Remember: The 't' is pronounced as part of the syllable that follows it.

Question inversion is possible only with subject pronoun and verb. When the subject is a noun, the noun remains before the verb and the appropriate pronoun must be introduced after the verb to form a question.

Vos parents sont-ils toujour en vacances?	Are your parents still on vacation?
Le restaurant est-il bon?	Is the restaurant good?

Rule 4 - The Verb: être

The most frequently occurring verb in French is être, 'to be'. Here are its forms, which vary grammatically according to the noun or subject pronoun with which it is tied:

je suis	I am
il est, elle est, on est	he is, she is, one is
suis-je	am I
est-il, est-elle, est-on	is he, is she, is one
sont-ils, sont-elles	are they
sommes-nous	are we
êtes —vous	are you
ils sont, elles sont	they are
nous sommes	we are
vous êtes	you are

Rule 5 - Indefinite Articles

The French noun-marker that corresponds to English 'a' or 'an' has the following shapes: indefinite articles un, une, des.

Singular

une occurs before feminine singular nouns:

une chambre	a bedroom
une amie	a friend

un occurs before masculine singular nouns:

un frère	a brother
un restaurant	a restaurant
un étage	a floor
un ami	a friend

Plural

As a rule, French nouns have to be preceded by a noun marker in the plural form as well as in the singular form.

des is the plural form for the indefinite article.

ils ont un enfant	they have a child
ils ont des enfants	they have children

(for practical purposes, des has been translated by some)

des restaurants	some restaurants
des chambres	some bedrooms

Rule 6 - Cardinal Numbers

Some cardinal number noun-markers are pronounced in a different way according to what follows:

1. un, une
2. deux
3. trois
4. quatre
5. cinq
6. six
7. sept
8. huit
9. neuf
10. dix
11. onze
12. douze
13. treize
14. quatorze
15. quinze
16. seize
17. dix-sept
18. dix-huit
19. dix-neuf

It may be noted that un/une is the only number which carries an indication of gender.

Rule 7 - Negative Adverb: Ne . . . Pas

A verb is negated by the presence of ne before it and pas after it:

Lisez.	Read.
Ne lisez pas.	Do not read.

Before a vowel, n' must occur instead of ne:

Vous êtes satisfait?	You're satisfied?
Vous n'êtes pas satisfait?	You're not satisfied?

When verb and subject pronoun are inverted, they are considered as an indivisible unit:

Est-il?	Is he?
N'est-il pas?	Isn't he?

Sont-elles?	Are they?
Ne sont-elles pas?	Aren't they?

Here is the verb 'etre' in its negative forms:

Je ne suis pas.	I am not.
Il n'est pas. (elle, on)	He is not. (she, one)
Ils ne sont pas. (elles)	They are not.
Nous ne sommes pas.	We are not.
Vous n'êtes pas.	You are not.

Inverted

Ne suis-je pas?	Am I not?
N'est-il pas? (elle, on)	Is he not? (she, one)
Ne sont-ils pas? (elles)	Are they not?
Ne sommes-nous pas?	Are we not?
N'êtes-vous pas?	Are you not?

Rule 8 - The Verb: Avoir

The second most frequently occurring verb in French is avoir 'to have'. Its forms in the present are:

j'ai	I have
il a (elle, on)	he has (she, one)
ils ont (elles)	they have
nous avons	we have
vous avez	you have
ai-je?	have I?
a-t-il? (elle, on)	has he? (she, one)
ont-ils (elles)	have they?
avons-vous?	have we?
avez-vous?	have you?
je n'ai pas	I don't have
il n'a pas (elle, on)	he doesn't have (she, one)
nous n'avons pas	we don't have
vous n'avez pas	you don't have
n'ai-je pas?	don't I have?
n'a-t-il pas? (elle, on)	doesn't he have? (she, one)
n'ont-ils pas? (elles)	don't they have?
n'avons-nous pas?	don't we have?
n'avez-vous pas?	don't you have?

Rule 9 - Demonstrative Adjectives

The noun-marker corresponding to English 'this, that' has the following shapes: demonstrative adjectives *ce*, *cet*, *cette*, *ces*.

Singular

ce occurs before masculine singular nouns beginning with a consonant:

ce restaurant	this restaurant
ce monsieur	this gentleman

cet occurs before masculine singular nouns beginning with a vowel:

cet enfant	this child
cet hôtel	this hotel

cette occurs before all feminine singular nouns. (Notice the identical pronunciation of *cet* and *cette*.)

cette malle	this trunk
cette femme	this woman
cette amie	this friend

Plural

ces occurs in front of all plural nouns:

ces restaurants	these restaurants
ces enfants	these children
ces malles	these trunks

Singular	Plural
Ce restaurant est bon.	Ces restaurants sont bons.
Cet hôtel est petit.	Ces hôtels sont petits.
Cette chambre est tres bien.	Ces chambres sont tres bien.
Cette heure est libre.	Ces heures sont libres.

Rule 10 - The Preposition: A

The preposition *à* + definite article has several shapes: à la, au:

Singular

à la in front of feminine nouns beginning with a consonant

Je vais à la gare.	I'm going to the station.

au in front of masculine nouns beginning with a consonant

Il est au restaurant.	He is at the restaurant.

à l' in front of all nouns beginning with a vowel.

Il est à l'hotel	He is at the hotel.

Plural

aux before all nouns.

Aux guichets deux et trois.	At ticket windows two and three.

Au, a la, a l', aux have different equivalents in English.

1. to the Allez-vous à la gare?	Are you going to the station?
2. at the Je suis à 'lhotel.	I am at the hotel.

3. The verb 'to be' followed by the preposition à has also the meaning of 'to belong to.'

C'est à la soeur de Janine.	It belongs to Janine's sister.

Rule 11 - Yes/No Questions

A yes/no question is one which has yes or no as possible answers. Besides the inversion process explained in Rule 1, there are two other ways of formulating yes/no questions in French:

1. Prefixing Est-ce que to the Subject-Verb type of utterance makes it into a yes/no question:

C'est 42 francs.	'It's 42 francs.'
Est-ce que c'est 42 francs?	'Is it 42 francs?'

Je peux vous donner deux coins fenêtres?
Est-ce que je peux vous donner deux coins fenêtres?

'I can give you two window seats.'
"Can I give you two window seats?'

2. Rising pitch movement on the final syllable also signals yes/no questions:

Vous êtes seul?
Aller et retour?
Dansun compartment pour fumeurs?

In the case of inversion and prefixation questions, rising pitch movement is optional.

Etes -vous seul?
Est-ce que vous êtes seul?

Rule 12 - Verbs Ending in -ER

In this rule, we are going to give the forms of the present tense of the verbs with infinitive ending in -ER. (*aller* will be studied separately later - see Rule 17). That part of the infinitive which remains when the ER is removed is called the *Present Stem*. For example:

Infinitive	Stem	Infinitive Ending
parler	parl-	-er
présenter	present-	-er
arriver	arriv-	-er
excuser	excus-	-er
déjeuner	dejeun-	-er
remercier	remerci-	-er

Example:

Here are the forms of *parler* - to speak:

je parle	*Est-ce que je parle?
il parle	Parle-t-il?
elle parle	Parle-t-elle?
on parle	Parle-t-on?
ils parlent	Parlent-ils?
elles parlent	Parlent-elles?
nous parlons	Parlons-nous?
vous parlez	Parlez-vous?

* The form *parle-je* is not a spontaneous speech form; use 'est-ce que je parle.'

Remember: When the verb begins with a vowel 'je' becomes j' and in the plural the liaison is compulsory between the subject pronoun and the verb.

Rule 13 - Possessive Adjectives

In French, the possessive adjectives (my, his, her, our, etc.) agree in gender and number with the noun which follows:

Positive Adjective	Before a singular noun beginning with:		Before a plural noun
	vowel	consonant	
my	mon	ma (f) mon (m)	mes
his, hers, its, one's	son	sa (f) son (m)	ses
our	notre		nos
your	votre		vos
their	leur		leurs

Note that the forms of our, your, their are the same whether the following noun is feminine or masculine.

Rule 14 - Indefinite Articles

In Rule 10, we have learned the preposition a followed by a definite article (à la, au, etc.). We are now going to study the preposition de followed by a definite article.

Here are the shapes:

Singular

de la before a feminine noun beginning with a consonant.

Je voudrais de la viande.	I would like some meat.

du before a masculine noun beginning with a consonant.

Je voudrais du pain.	I would like some bread.

de l' before any noun beginning with a vowel.

Je voudrais de l'aspirine.	I would like some aspirin.

Plural

des before masculine and feminine nouns.

Je voudrais des gâteaux.	I would like some cakes.

du, de la, de l', des have different equivalents in English:

1. some, any (indicating quantity)

Voulez-vous du beurre?	Do you want some butter?
Avez-vous de la viande?	Do you have any meat?

The English equivalent for des might sometimes be omitted in English. For practical purposes, we have translated it by some or any.

Avez-vous des bagages?	Do you have any luggage? Do you have luggage?

2. from the

M. Lelong rentre de la gare.	Mr. Lelong is coming back from the station.
Cette rue va de l'hôtel à la gare.	This street goes from the hotel to the station.

3. possessive case

C'est le frère du boucher.	He is the butcher's brother.
C'est la fenêtre de l'hôtel.	It's the hotel window.
C'est la chambre des enfants.	It's the children's room.

Rule 15 - Numbers to 100

The cardinal number noun-markers from 20 to 100 are as follows in their isolation form:

		Note the following forms:	
20	vingt	21	vingt et un
30	trente	31	trente et un
40	quarante	41	quarante et un
50	cinquante	51	cinquante et un
60	soixante	61	soixante et un
70	soixante-dix	71	soixante et onze
80	quatre-vingts	81	quatre-vingt un
90	quatre-vingt-dix	91	quatre-vingt onze
100	cent	101	cent un

All other forms are composed of the numbers 1 through 19 postposed:

22	vingt-deux
23	vingt-trois
24	vingt-quatre
25	vingt-cinq
26	vingt-six
27	vingt-sept
28	vingt-huit
29	vingt-neuf
32	trente-deux
42	quarante-deux
52	cinquante-deux
62	soixante-deux
72	soixante-douze

Rule 16 - Prepositions: Chez/a

The form chez, like the forms à and de, is a preposition and occurs before nouns and pronouns. However, chez occurs only before a noun (or pronoun) which refers to a person, à has no such restriction.

chez (a person)	'at, to a person's house, home, office, store, place of business, etc.'
à (a place)	'at, to a place, etc.'

Je vais chez le boulanger.	'I'm going to the baker's.'
Je vais chez à la boulangerie.	'I'm going to the bakery.'
On fait nettoyer les costumes chez le teinturier.	'You have your suits cleaned at the dry cleaner's.'
On fait nettoyer les costumes à la teinturerie.	'You have your suits cleaned at the dry cleaning shop.'

In fact, the two forms:

Je vais chez le boulanger-Je vais à la boulangerie

have exactly the same meaning, but the two prepositions are not interchangeable.

Rule 17 - The Verb: Aller

The third of the highly frequent verbs in French is aller, 'to go'. Here are its forms:

je vais	'I go'
il va	'he goes
ils vont	'they go'
nous allons	'we are going'
vous allez	'you are going'
est-ce que je vais ..?	'am I going?'
vais-je ..?	'am I going?'
va-t-il ..?	'is he going?'
vont-ils ..?	'are they going?'
allons-vous ..?	'are we going?'
allez-vous ..?	'are you going?'
je ne vais pas	'I am not going'
il ne va pas	'he is not going'
ils ne vont pas	'they are not going'
nous n'allons pas	'we are not going'
vous n'allez pas	'you are not going'
est-ce que je ne vais pas ..?	'am I not going?'
ne vais-je pas ..?	'am I not going?'
ne va-t-il pas ..?	'isn't he going?'
ne vont-ils pas ..?	'aren't they going?'
n'allons-nous pas ..?	'aren't we going?'
n'allez-vous pas ..?	'aren't you going?'

Aller has several equivalents in English:

1. to go

Voulez-vous aller au Café de Paris?	Do you want to go to the Cafe de Paris?

2. to be going to (concept of future)

Je vais les remplir tout de suite.	I'm going to fill them out right away.

3. to be (talking about health)

Comment allez-vous?	How are you?
Il va bien.	He is fine.

4. to fit

Cette paire me va tres bien.	This pair fits me very well.

Rule 18 - Indefinite Adjectives

Indefinite adjectives are: plusieurs, quelques, chaque, certain, quel.

1. plusieurs 'several' is always and only plural

plusieurs hôtels	several hotels
plusieurs cafés	several cafes

2. quelques 'a few' also occurs before plural nouns.

quelques amis	a few friends
quelques minutes	a few minutes

3. chaque 'each' is always singular.

chaque auto	each car
chaque manteau	each coat

4. certain 'certain' shows gender and number.

une certaine fiche	'a certain form'
un certain jour	'a certain day'
certaines places	'certain seats'
certains billets	'certain tickets'

5. quel 'which, what', shows gender and number.

Par quel train arrive-t-il?	'On which train is he arriving?'
Je sais dans quel region il est.	'I know in what region he is.'
Quelle heure est-il?	'What time is it?'

Rule 19 - Negative Constructions

After the sequence 'ne + Verb + pas', the noun-markers 'un, une, des' are replaced by de (or d' if followed by a word beginning with a vowel).

Il a un livre.	Il n'a pas de livre.
Il a des livres.	Il n'a pas de livres.
Il a des soeurs.	Il n'a pas de soeurs.
Ils ont des enfants.	Ils n'ont pas d'enfants.

Note: Certain occurrences when this rule does not apply will be explained later.

Rule 20 - Large Numbers

100	cent
200	deux cents
300	trois cents
400	quatre cents
500	cinq cents
600	six cents
700	sept cents
800	huit cents
900	neuf cents
1,000	mille
1,100	onze cents 'or' mille cent
1,200	douze cents 'or' mille deux cents
1,300	treize cents 'or' mille trois cents
1,400	quatorze cents 'or' mille quatre cents
1,500	quinze cents 'or' mille cinq cents
1,600	seize cents 'or' mille six cents
1,700	dix-sept cents 'or' mille sept cents
1,800	dix-huit cents 'or' mille huit cents
1,900	dix-neuf cents 'or' mille neuf cents
2,000	deux mille
3,000	trois mille
10,000	dix mille
20,000	vingt mille
30,000	trente mille
100,000	cent mille

200,000	deux cent mille
300,000	trois cent mille
1,000,000	un million
5,000,000	cinq millions
1,000,000,000	un milliard

The numbers *million* and *milliard* are marked nouns:

cent francs	'one hundred francs'
mille francs	'one thousand francs'

but:

un million de francs	'one million francs'
un milliard de francs	'one billion francs'

Rule 21 - Impersonal Verbs

Weather phenomena are expressed by verbs having as subjects the impersonal subject pronoun *il*. There are three such verb patterns:

1. *Il fait*, followed by

   a. certain adjectives

Il fait froid.	It's cold weather.
Il fait chaud.	I's hot weather.
Il fait sec.	It's dry weather.
Il fait beau (temps).	It's nice (weather).
Il fait mauvais (temps).	It's bad (weather).
Il fait frais.	It's cool weather.

   b. *du* + N

Il fait du soleil	It's sunny weather.
Il fait du vent.	It's windy weather.

2. *Il y a*, followed by du/de la + N

Il y a du soleil.	It's sunny weather.
Il y a du vent.	It's windy weather.

3. *Special Verbs*.

(pleuvoir) Il pleut.	It's raining.
(geler) Il gele.	It's freezing.
(neiger) Il neige.	It's snowing.

Besides those verbs which express weather phenomena, there are other impersonal verbs:

(falloir) C'est exactement ce qu'il me faut.
It's exactly what I need.

(y avoir) Il y a un bon cafe près d'ici.
There's a good cafe near here.

Note that some verbs can be 'occasionally' impersonal.

Il reste plusieurs chemises.	There are several shirts left.
but: Nous restons ici.	We're staying here.
Il fait du vent.	It's windy weather.
but: Nous faisons des courses.	We're shopping.

Rule 22 - The Verb: Faire

Here are the forms of the highly frequent verb faire, 'to do, to make':

je fais	I make
il fait	he makes
ils font	they make
nous faisons	we make
vous faites	you make
est-ce que je fais	do I make
fait-il	does he make
font-ils	do they make
faisons-nous	do we make
faites-vous	do you make
je ne fais pas	I don't make
il ne fait pas	he doesn't make
ils ne font pas	they don't make
nous ne faisons pas	we don't make
vous ne faites pas	you don't make
Est-ce que je ne fais pas de café?	don't I make coffee?
ne fait-il pas	doesn't he make
ne font-ils pas	don't they make
ne faisons-nous pas	don't we make
ne faites-vous pas	don't you make

Note: The verb faire must always be used with an object, never alone.

Rule 23 - Adjectives - Forms

We call adjectives words that modify nouns or pronouns. (We are only going to study adjectives introduced in the text up to now).

In English, adjectives have only one shape. In French, they usually have four:

two for the singular (masculine and feminine)
two for the plural (masculine and feminine)

Number

1. Plural of most French adjectives is formed by adding an 's' to the singular form:

le petit magasin	les petits magasins
le grande route	les grandes routes

2. Adjectives ending in 's' or 'x' in the singular do not change in the plural:

le vieux magasin (old)	les vieux magasins
le mauvais hôtel	les mauvais hôtels

3. Adjectives ending in 'eau' in the masculine singular add an 'x' to form the masculine plural:

le nouveau magasin	les nouveaux magasins
le beau livre	les beaux livres

Gender

4. Most adjectives have a different form depending on whether they modify a masculine or a feminine noun. In general, the feminine form is obtained by adding an 'e' to the masculine form.

un petit paquet	une petite valise
un joli modèle	une jolie route

(If the adjective ends with a vowel in the masculine, the pronunciation is the same for both forms.)

5. When adjectives end in 'e' in the masculine form, there is no change in the feminine form:

un jeune employe	une jeune employee
un autre boulanger	une autre patisserie
un compartiment libre	une place libre
un climat humide	une chambre humide

(Adjectives ending in 'e' follow the general rule and add an 'e' in the feminine form.)

un paquet recommande	une lettre recommandee

6. Also included in that category are the ordinal numbers formed by adding 'ieme' to the cardinal numbers:

le deuxième jour	la deuxième semaine
le troisième matin	la troisième fois
le quarante-cinquième mot	la quarante-cinquième question

7. Some adjectives do not fit in the preceding rules or they may present some other peculiarities:

a. When the masculine form ends in 'x', the feminine form will end in 'se'.

Il est heureux.	Elle est heureuse (see d. for exceptions)

b. When the masculine form ends in 'er', the feminine form will ends in 'ere'.

le premier étage	la premiere semaine
le dernier jour	la derniere année

c. When the masculine form ends in 'f', the feminine form will end in 've'.

un manteau neuf (new)	une robe neuve

d. Some adjectives have two shapes for the masculine singular: one is used before words beginning with a vowel; the other, before words beginning with a consonant.

Masculine		Feminine	
Singular Before			
A Vowel	A Consonant (pl)	Singular	Plural
vieil	vieux (vieux)	vieille	vieilles
bel	beau (beaux)	belle	belles
nouvel	nouveau (nouveaux)	nouvelle	nouvelles

Examples:

un vieil ami	un vieux monsieur
un bel hôtel	un beau magasin
un houvel employé	un nouveau gérant

Note the following adjectives:

un costume blanc	une chemise blanche
un temps frais	une soiree fraiche
un climat sec	une saison seche
un gros livre	une grosse caisse
un costume marron	une robe marron
un ancien hôtel	une ancienne route
un bon patissier	une bonne boulangerie

Rule 24 - Object Pronouns

In French, object pronouns precede the verb in affirmative, negative or interrogative sentences:

me, m'	me, to me
nous	us, to us
vous	you, to you
le, l'	him, it
la, l'	her, it
les	them

Examples:

Elle me convient tout à fait.
Combien vous dois-je?
Je la prends.
Pourquoi ne l'envoyez-vous pas de chez vous?

We will see later, when we study the imperative form, that object pronouns sometimes follow the verb.

(French equivalent for 'to him,' 'to her,' to them' will be studied in Rule 29.)

Rule 25 - Subject Pronoun: Ce

Ce: subject pronoun occurs only as a third person subject of the verb "être" and can be translated by "it," "he," "she," they," "that."

Ce is used instead of "il, elle, etc." if the verb "être" is followed by either:

1. A noun marker (le, mon, etc.):

C'est le numéro 19.
C'est un très bon restaurant.
C'est ma femme.

(Notice the plural form 'ce sont,' the interrogative form in the singular 'est-ce,' in the plural 'est-ce que ce sont').

2. A pronoun:

C'est ca.
C'est tout ce qui reste.

3. A clause:

C'est exactement ce qu'il me faut.

In the three cases below, "il" or "elle" is the subject if the referent (the word to which it refers) has gender and number, i.e., il or elle replaces a subject. Otherwise, the subject is ce. These cases are:

1. Before an adjective:

Elle n'est pas mauvaise	"It's not bad." or "She's not bad."
Il n'est pas mauvais	"It's not bad." or "He's not bad."
Ce n'est pas mauvais.	"It's not bad." or "That's not bad."

In the first utterance, the speaker is signalling that what he is talking about is feminine and singular and in the second, masculine and singular. He is referring to a noun previously mentioned or pointed out. In the third sample, he is not giving that information. Similarly:

2. Before an adverb:

Il est ici.	"It's here." or "He's here."
C'est ici.	"It's here."

3. Before a prepositional phrase:

Il est à Lyon	"It's in Lyon." or "He's in Lyon."
C'est à Lyon.	"It's in Lyon."

Compare these two frames, both of which refer to a person's nationality, profession, religion, etc.:

"He's French."	C'est un Français. Il est français.

"She's French."	C'est une Française. Elle est française.

Notice that, in some cases, only "ce" can be used. The use of "c'est" versus "il est" will be discussed in Rule 83.

Rule 26 - Question - Words

1. The question-words which are used at the beginning of a question and also after a preposition are the following:

"who?"	qui?
"what?"	qu', que?
"where?"	ou?
"when?"	quand?
"why?"	pourquoi?
"how?"	comment?
"how much, how many?"	combien?
"which, what?"	quel, quelle? quels, quelles?

2. The question-words are followed by subject-verb inversion, whether the subject is a noun or a pronoun:

Comment va votre frère?	Q + Verb + Noun
Comment va-t-il?	Q + Verb + SP

3. The question-word *combien* may occur before a noun; in this position it has the form *combien de*:

Combien vous dois-je?
Combien de malles avez-vous?

4. The question-words *quel*, *quelle*, etc., may occur before a noun; in this position it is a noun-marker and has the shapes described in Rule 18.

Pour quelle date?
Par quel train partez-vous?

Quel may also occur before third-person forms of the one verb *être*:

Quelle est votre pointure?
Quelles sont les heures d'arrivée?

5. Questions containing question-words may have the same intonation as statements:

Ou est le restaurant?	C'est le restaurant.

Rule 27 - The Verbs: Pouvoir, Vouloir, Savoir

These three verbs occur frequently and have several unpredictable forms:

pouvoir "to be able to"

je peux
il peut

ils peuvent
vous pouvons
vous pouvez

Special inversion form: Puis-je . . . ?

vouloir "to want"

je veux
il veut

ils veulent
nous voulons
vous voulez

No inversion form in the first person, singular: Est-ce que je veux . . . ?

savoir "to know"

je sais
il sait

ils savent
nous savons
vous savez

Rule 28 - Adjectives - Position

In English, adjectives precede the nouns they qualify. In French, some adjectives:

a. follow the noun (post nominal)
b. precede the noun (pre-nominal)
c. may be used in both positions.

1. In French, most adjectives follow the noun. Among these are adjectives indicating color, shape, religion, nationality and past participles used as adjectives.

une valise verte
un employé français
un paquet recommandé

2. Examples of pre-nominal adjectives can be found in Rules 9, 13, and 18. Remember that:

demonstrative adjectives - ces enfants
indefinite adjectives - plusieurs enfants
interrogative adjectives - quelle heure
possessive adjectives - ma soeur
numeral adjectives - deux enfants
ordinal adjectives - première étage

also precede the nouns.

3. Some adjectives can occasionally change their position for stylistic reasons.

d'excellentes vacances	"excellent vacation"
des vacances excellentes	"excellent vacation"

4. Some adjectives are used in different positions according to the nouns they qualify, although their meaning is exactly the same in both positions.

la prochaine fois	"next time"
la semaine prochaine	"next week"

5. We have also met adjectives which have different meanings according to their position:

adjectives	pre-nominal	post-nominal
seul	only one	alone
cher	dear	expensive
ancien	former	old, ancient
vrai	real	true
dernier	last of a series	last, preceding

Rule 29 - Object Pronouns - Lui, Leur

lui	"to him, to her"
leur	"to them"

Like the other object pronouns studied in Rule 24, "lui" and "leur" precede the verb in affirmative, negative and interrogative sentences:

Si je lui telephonais?
Je leur telephone souvent.

We will see later in Rule 31 , the position of pronouns in the imperative form:

Transmettez-leur mon meilleur souvenir.

Rule 30 - Object Pronouns - En, Y

Object Pronoun en

The object pronoun en is invariable and immediately precedes the verb, (except in the imperative affirmative when en replaces "de + noun or pronoun.")

Remember:

1. The object pronoun en is used instead of le, la, les, if the noun it replaces is used in an indefinite or partitive sense:

Il apporte des bagages	"He is bring some luggage."
Il en apporte.	"He is bringing some."
Voilà des billets.	"Here are some tickets."
En voilà.	"Here are some."
Il achète du pain.	"He is buying some bread."
Il en achète.	"He is buying some."

but:

Il apporte les bagages.	"He is bringing the luggage."
Il les apporte.	"He is bringing them."
Voilà les billets.	"Here are the tickets."
Les voilà.	"Here they are."
Il achète le pain.	"He is buying the bread."
Il l'achète.	"He is buying it."

2. The object pronoun en is also used when the noun is preceded by a number or an adverb of quantity.

Donnez-moi quatre chemises.	"Give me four shrits."
Donnez-m'en quatre.	"Give me four."
Nous avons plusieurs chambres libres.	"We have several rooms vacant."
Nous en avons plusieurs libres.	"We have several vacant."

3. en can be used for "de + location," meaning from there.

Il vient du Midi.	He is coming from the south of France.
Il en vient.	He is coming from there.

Il part du bureau à 6 heures.	He leaves the office at 6 o'clock.
Il en part à 6 heures.	He leaves it at 6 o'clock.

4. *en* is used with verbs followed by *de*, even if the noun or pronoun is used in a definite way.

Il a besoin *de l'*auto.	He needs the car.
Il *en* a besoin.	Heneeds it.
Il a besoin de celles-ci.	He needs these.
Il en a besoin.	He needs them.
Elle parle du discours.	She's talking about the speech.
Elle en parle.	She's talking about it.

Object Pronoun y

The object pronoun *y* is invariable. It precedes the verb, except in the imperative affirmative.

y replaces "à + noun or pronoun"

Il travaille à la gare.	"He works at the station."
Il y travaille.	"He works there."
Est-il au bureau?	"Is he at the office?"
Y est-il?	"Is he there?"

Remember that *y* could be translated by "*of* or *about it*" or "*of* or *about them*," but should only refer to an animal or inanimate object.

Nous pensons aux vacances.	"We think about the vacation.
Nous y pensons.	"We think about it."
Nous pensons à la neige.	"We're thinking about the snow."
Nous y pensons.	"We're thinking about it."

Rule 31 - Imperatives

1. Verb forms in "ez" occurring initially and neither preceded nor followed by the subject pronoun "vous" are used to indicate a request or a command.

Vous parlez français.	"You're speaking French."
Parlez français.	"Speak French."

2. Such constructions are called imperatives (imperatif). Similarly, "ons" forms in the same frame are regarded as imperatives, with the meaning, "Let's _____."

Parlons français.	"Let's speak French."
Allons dans le Midi	"Let's go to the south of France."

3. Four verbs have special imperative stems:

avoir	Ayez de la monnaie.	"Have change."
être	Soyez en avance.	"Be early."
savoir	Sachez ce que vous voulez.	"Know what you want."
vouloir	Veuillez me suivre.	"Please follow me."

4. Object pronouns follow affirmative imperatives and precede negative imperatives:

Parlez-lui ce soir.	"Speak to him tonight."
Ne lui parlez pas ce soir.	"Don't speak to him tonight."
Donnons-lui le numéro.	"Let's give him the number."
Ne lui donnons pas le numéro.	"Let's not give him the number."

Rule 32 - Verbs Ending in - IR

1. In this rule, we are going to give the forms of the present tense of some infinitives ending in "ir."

Example: Remplir "To fill up or to fill out"

je remplis	"I fill out"
il remplit	"He fills out"
elle remplit	"She fills out"
ils remplissent	"They fill out" (M)
elles remplissent	"They fill out" (F)
nous remplissons	"We fill out"
vous remplissez	"You fill out"

Notice the "iss" added between the stem and the ending in the plural.

2. Here are some common verbs conjugated on the same pattern:

remplir	Ils remplissent des fiches.	"They're filling out forms."

choisir	Ils choisissent la nouvelle route.	"They're choosing the new road."
rougir	Ils rougissent pour un rien.	"They blush over nothing."
palir	Je palis de peur.	"I get pale with fear."
grandir	Ils grandissent vite.	"They're growing up fast."
vieillir	Nous vieillissons trop tot.	"We grow old too soon."
grossir	Ils grossissent parce qu'ils mangent trop.	"They're getting fat because they eat too much."
maigrir	Nous maigrissons quand nous travaillons.	"We lose weight when we work."
ralentir	Il ralentit à cause de la pluie.	"He's slowing down because of the rain."
atterrir	Ils atterrissent près d'ici.	"They're landing near here."
obéir	Elle obéit à ses parents.	"She obeys her parents."

(The other 'ir' ending verbs will be studied in Rules 42, 47 and 78.)

Rule 33 - Comparative and Superlative

In French, the comparative and superlative forms of adjectives and adverbs are made in a way somewhat similar to English.

Comparative

1. plus . . . que corresponds to the English comparative ". . . er than" or "more . . . than."

Cette route est plus jolie que l'autre.	This road is prettier than the other one.
La chemise blanche est plus chère que la bleue.	The white shirt is more expensive than the blue one.
Il parle plus lentement que moi.	He talks more slowly than I do.

2. moins . . . que corresponds to the English "less . . . than."

Il a fait *moins* froid *que* l'année dernière.	The weather has been *less* cold than last year.
Je téléphone *moins* souvent *que* lui.	I telephone *less* often *than* he does.

3. *aussi* . . . *que* corresponds to the English "as . . . . as."

Aussi courts *que* d'habitude?	*As* short *as* usual?
Elle coûte *aussi* cher *que* l'autre.	It costs *as* much *as* the other one.

Note that after a negative, *si* may be used instead of *aussi* in some expressions.

Pas aussi courts que ça.	Pas si courts que ça.

Superlative

le plus
la plus corresponds to English "the most . . ."
les plus or "the . . .est.'

le moins
la moins corresponds to English "the least."
les moins

1. In the superlative form, the adjectives which habitually precede the noun can either precede or follow the noun.

La plus jolie chambre.	The prettiest room.
La chambre la plus jolie.	The prettiest room.

2. The adjectives which normally follow the noun must follow the noun when used in the superlative.

Les jours les plus courts sont en hiver.	The shortest days are in the winter.
Voici la robe la moins chère.	Here is the least expensive dress.

(Irregular comparatives and superlatives will be studied in Rule 38.)

Rule 34 - Passe Composé (Avoir)

A past tense called the *Passe Composé* is composed of the present of the auxiliary avoir (to have) or etre (to be) followed by a past participle.

In this rule, we are going to study the Passé Composé of the verbs conjugated with the auxiliary avoir.

j'ai parlé	"I spoke"
il a parlé	"he spoke"
ils ont parlé	"they spoke"
nous avons parlé	"we spoke"
avous avez parlé	"you spoke"
je n'ai pas parlé	"I didn't speak"
il n'a pas parlé	"he didn't speak"
ils n'ont pas parlé	"they didn't speak:
nous n'avons pas parlé	"we didn't speak"
vous n'avez pas parlé	"you didn't speak"
ai-je parlé?	"did I speak?"
a-t-il parlé?	"did he speak?"
ont-ils parlé?	"did they speak?"
avons-nous parlé?	"did we speak?"
avez-vous parlé?	"did you speak?"
n'ai-je pas parlé?	"didn't I speak?"
n'a-t-il pas parlé?	"didn't he speak?"
n'ont-il pas parlé?	"didn't they speak?"
n'avons-nous pas parlé?	"didn't we speak?"
v'avez-vous pas parlé?	"didn't you speak?"

As we have indicated before in Rule 28, some past participles are also used as adjectives:

un paquet recommandé	"a registered package"

As such, they follow the same rules as the adjectives and agree in gender and number with the noun they modify.

Rule 35 - Object Pronouns - Order

All the object pronoun forms and their positions relative to the verb have been presented. The object pronoun forms can occur in sequence; more than two never occur. The sequence is shown in the tables below:

1. All cases except the affirmative imperative.

me	le	lui	y	
nous	la	leur	en	Verb
vous	les			

2. Affirmative imperative.

	le	nous	y
	la	vous	en
Verb	les	lui	
		leur	
		m'	
		moi	

Rule 36 - Adjective - Noun Plural

If a noun in the plural form is preceded by an adjective, de should be used instead of the indefinite article des.

Examples:

Avez-vous des nouvelles de votre frère?
Avez-vous de bonnes nouvelles de votre frēre?

Avez-vous des modeles en marron?
Avez-vous d'autres modeles en marron?

Rule 37 - Verbs Ending in - IRE

In this rule, we are going to give the forms of the present tense of verbs with infinitive ending in ire.

conduire "to drive"	je conduis	"I drive"
	il conduit	"he drives"
	ils conduisent	"they drive"
	nous conduisons	"we drive"
	vous conduisez	"you drive"

Past participle: conduit (e)

Other verbs like conduire:

construire:	Ils construisent une route. "They're building a road."
détruire:	Je détruis ces vieux livres. "I'm destroying these old books."
introduire:	La France introduit de nouveaux vins en Amerique. "France is introducing new wines in America."
produire:	Nous produisons deux cents autos par jour. "We produce two hundred cars a day."
traduire:	Traduisez-vous la lettre en français? "Are you translating the letter into French?"

Similarly conjugated, except for the vous dites form, is:

dire	je dis	"I say"
"to say"	il dit	"he says"
	ils disent	"they say"
	nous disons	"we say"
	vous dites	"you say"

Past participle: dit (e)

The verb lire differs only in its past participle from "conduire":

lire	je lis	"I read"
"to read"	il lit	"he reads"
	ils lisent	"they read"
	nous lisons	"we read"
	vous lisez	"you read"

Past participle: lu

Rule 38 - Comparatives and Superlatives - Irregular

Instead of using plus to form the comparative, a few adjectives and adverbs have a special comparison form.

Adjectives

bon	meilleur	le meilleur
"good"	"better"	"the best"

mauvais	plus mauvais	le plus mauvais
	pire	le pire
"bad"	"worse"	"the worst"

(pire and le pire are less common than the regular form)

petit	plus petit	le plus petit
	moindre	le moindre
"small"	"smaller"	"the smallest"

(moindre is hardly ever used in the comparative, but often used in the superlative, in which case it may be translated by "the slightest.")

Il ne fait pas le moindre effort.	'He doesn't make the slightest effort."
Je n'ai pas la moindre idée de ce qu'il faut faire.	"I don't have the slightest idea what must be done."

Adverbs

bien	mieux	le mieux
"well"	"better"	"the best"

mal	plus mal	le plus mal
	pis	le pis
"badly"	"worse"	"the worst"

(pis and le pis are very seldom used.)

Rule 39 - Passe Composé (être)

In this rule, we are going to study the "passe composé" of the verbs conjugated with the auxiliary être (to be.)

Only a few verbs are conjugated with the auxiliary "etre", but they are frequent in occurrence. Here is a list of the most commonly used ones and the past participle of each.

Infinitive	Past Participle	
aller	allé	to go
arriver	arrivé	to arrive
descendre	descendu	to go down
devenir	devenu	to become

entrer	entré	to enter
monter	monté	to go up
mourir	mort	to die
naitre	né	to be born
partir	parti	to leave
passer	passé	to go by, to come by
rentrer	rentre	to come back, to go back
rester	resté	to stay
retourner	retourné	to return
revenir	revenu	to come back
sortir	sorti	to go out
tomber	tombé	to fall
venir	venu	to come
redescendre	redescendu	to go down again
remonter	remonté	to go up again
repartir	reparti	to leave again
resortir	resorti	to go out again
retomber	retombé	to fall again

Here is the Passé Composé of the verb "arriver":

Je suis arrivé	"I arrived"
il est arrivé	"he arrived"
ils sont arrivés	"they arrived"
nous sommes arrivés	"we arrived"
vous êtes arrivés	"you arrived"
suis-je arrivé?	"did I arrive?"
est-il arrivé?	"did he arrive?"
sont-ils arrivés?	"did they arrive?"
sommes-nous arrivés?	"did we arrive?"
êtes-vous arrivés?	"did you arrive?"
je ne suis pas arrivé	"I didn't arrive"
il n'est pas arrivé	"he didn't arrive"
ils ne sont pas arrivés	"they didn't arrive"
nous ne sommes pas arrivés	"we didn't arrive"
vous n'êtes pas arrivés	"you didn't arrive"
ne suis-je pas arrivé?	"didn't I arrive?"
n'est-il pas arrivé?	"didn't he arrive"
ne sont-ils pas arrivés?	"didn't they arrive?"
ne sommes-nous pas arrivés?	"didn't we arrive?"
n'êtes-vous pas arrivés?	"didn't you arrive?"

Rule 40 - Expressions of Quantity

When a word referring to a quantity or measure precedes a noun, that noun is preceded by de. That word can be:

1. A noun. Noun expressing quantity + de + Noun.

Je prendrais bien un peu de pâté.
Apportez-nous une carafe de vin rouge.
Je voudrais un paquet de Gauloises.

2. An adverb. Adverb expressing quantity + de + Noun.

Combien de malles avez-vous?	"How many trunks do you have?"
J'ai beaucoup de travail.	"I've got a lot of work."
J'ai trop de travail.	"I've got too much work."
J'ai tant de travail.	"I've got so much work."
J'ai peu de travail.	"I've got a little work."
J'ai pas mal de travail.	"I've got quite a bit of work."

Comparison of quantities. When comparing quantities, de should precede both nouns.

Il y a plus de vin rouge que de vin blanc.
Nous avons moins de malles que de valises.

Remember that a noun following "plusieurs" is not preceded by de.

Il a plusieurs livres.

Rule 41 - Expressions of Quantity with EN

In the preceding rule, we studied expressions of quantity. If such expressions occur without a noun following, the verb should be preceded by en.

1. Je prendrais bien un peu de pâté.	J'en prendrais bien un peu.
Combien de malles avez-vous?	Combien en avez-vous?
Nous vendons beaucoup de chemises.	Nous en vendons beaucoup.

This also occurs with:
a. "un as an indefinite article.
b. Numbers
c. "plusieurs"
d. "quelques"

2.	Je voudrais une chambre avec salle de bains.	J'en voudrais une avec salle de bains.
	Je crois qu'il y a un restaurant au coin de la rue.	Je crois qu'il y en a un au coin de la rue.
3.	J'ai deux coins fenêtres.	J'en ai deux.
	Voici trois modèles en marron.	En voici trois en marron.
	Donnez-moi quatre chemises.	Donnez-m'en quatre.
4.	Nous avons plusieurs chambres de libres.	Nous en avons plusieurs de libres.
	N'y a-t-il pas plusieurs restaurants dans le quartier?	N'y en a-t-il pas plusieurs dans la quatier?
5.	Nous avons quelques livres.	Nous en avons quelques-uns.
	Nous avons quelques chemises.	Nous en avons quelques-unes.

Note that "quelques" is never used alone.

Rule 42 - Verbs Ending in IR (Partir)

In this rule, we are going to give the forms of the present tense of a few verbs ending in ir. Their peculiarity is modification of the stem from the singular to the plural.

partir	to leave, to depart
je pars	"I leave"
il part	"he leaves"
elle part	"she leaves"
on part	"one leaves"
ils partent	"they leave" (M)
elles partent	"they leave" (F)
nous partons	"we leave"
vous partez	"you leave"

Following the same two-stem pattern are:

		Plural Stem	Singular Stem
sortir	"to go out"	sort-	sor-
mentir	"to lie"	ment-	men-
sentir	"to feel, to smell"	sent-	sen-
dormir	"to sleep"	dorm-	dor-
servir	"to serve"	serv-	ser-

The past participle for all these verbs is made with the ending i added to the plural stem.

Infinitive	Past Participle
partir	parti
dormir	dormi
sortir	sorti
mentir	menti
sentir	senti
servir	servi

Remember that "sortir" and "partir" are conjugated with the auxiliary "etre" in the "passe compose."

Rule 43 - Infinitive Verb Phrases

Verb phrases are defined as two or more forms in sequence. There are two types of verb phrases. The past participle verb phrases were discussed in Rules 34 and 39.

avoir + past participle J'ai travaillé pour une compagnie française.

être + past participle Je suis allé a la campagne.

Both these patterns carry the meaning of past time. All other verb phrases in French are infinitive verb phrases.

Here is a list of the verbs (already encoutnered in the text) often followed by an infinitive. Note that they have been divided into three groups:

1st column - verb + infinitive
2nd column - verb + de + infinitive
3rd column - verb + a + infinitive

aller
faire
vouloir
pouvoir
savoir
devoir
venir
aimer
compter
desirer
esperer
laisser
monter
passer
rentrer

venir de
essayer de
avoir peur de
avoir raison de
avoir besoin de
accepter de
dire de
demander de
être heureux de
être en train de
finir de
il y a lieu de
risquer de
remercier de
terminer de

commencer à
tenir à
reussir à

sortir
il faut
oublier de

Je vais faire apporter vos bagages.
Je voudrais faire enregistrer mes bagages pour Lille.

Rule 44 - Object Pronouns - Infinitive Verb Phrases

Object pronouns in infinitive verb phrases precede the infinitive:

SP + verb + object pronoun + infinitive

Je vais les lire dans ma chambre.	"I'm going to read them in my room."
Voulez-vous lui parler?	"Do you want to speak to him?"
Pourriez-vous me donner l'adresse du bureau de votre mari?	"Could you give me the address of your husband's office?"
Savons-nous les faire?	"Do we know how to make them?"
Elle doit y aller.	"She must go there."
Venez-vous le prendre?	"Are you coming to get it?"
Il vient de l'apporter.	"He just brought it."

However, with certain verbs such as faire, the pattern will be as follows:

SP + object pronoun + verb + infinitive

faire with the meaning of "to have something done."

Je les fais traduire.	"I have them translated."

Among the verbs already encountered which follow the same pattern are:

laisser with the meaning of "to let."

Je les laisse entrer.	"I let them come in."

envoyer chercher with the meaning of "to send for."

Je les envoie chercher.	"I send for them."

Rule 45 - Essential Object Pronouns

Certain frequently occurring verbs in French are always preceded by object pronouns when not followed by nouns:

such is not always the case with the corresponding English verbs:

aller	Y allez-vous? Oui, j'y vais.	"Are you going?" "Yes, I'm going."
avoir	En avez-vous? Oui, j'en ai.	"Have you any?" "Yes, I have."
avoir besoin de	En avez-vous besoin? Oui, j'en ai besoin.	"Do you need any?" "Yes, I do."
etre	Etes-vous amércain? Oui, je le suis.	"Are you an American?" "Yes, I am."
dire	Dites-vous qu-il arrive? Oui, je le dis.	"Are you saying he's arriving?" "Yes, I'm saying so."
falloir	Faut-il partir? Oui, il le faut.	"Is it necessary to leave?" "Yes, it is."
faire	Faites-vous des gâteaux? Oui, j'en fais.	"Do you make cakes?" "Yes, I do."

Rule 46 - Expanded Noun Phrases

When more than one noun-marker or pre-nominal adjective occur in a noun phrase, the other is as follows:

tout	le, la . . .		(Cardinal Numbers)	même	autre	beau	
	ce . . .				(Ordinal Numbers)	bon	
	mon . . .					faux	
	quel . . .					grand	
						gros	
			un . . .			jeune	+ Noun
						joli	
		chaque				mauvais	
		quelques				nouveau	
		plusieurs				petit	
						vieux	
						vrai	

Although the table shows many possibilities, French speakers do not usually cluster more than two of these forms before a noun. When they do, the order is fixed, which is not the case in English:

Les premiers beaux jours du printemps.	"The first beautiful days or spring." or "The beautiful first days of spring."
Les deux autres bureaux.	"The two other offices." or "The other two offices."

Rule 47 - Verbs Like Venir

The verb venir:

venir

"to come"	je viens	"I am coming"
	il vient	"he is coming"
	ils viennent	"they are coming"
	nous venons	"we are coming"
	vous venez	"you are coming"

Past participle: (etre) venu

Similarly:

venir de	Nous venons d'arriver. "We've just arrived."
convenir	Elle me convient tout à fait. "It suits me fine."
devenir	Que devenez-vous? "What's been happening to you?"
maintenir	Il maintient que c'est vrai. "He maintains that it's true."
obtenir	Il obtient toujour ce qu'il veut. "He always gets what he wants."
prévenir	Je l'ai prevenu à temps. "I let him know in time."
retenir	Ou puis-je retenir mes places? "Where can I reserve my seats?"

revenir	Ils reviennent de la campagne. "They're coming back from the country."
se souvenir (de)	Vous souvenez-vous de la dernière commande de M. Pelletier? "Do you remember Mr. Pelletier's last order?"
tenir	Elle tient un livre. "She's holding a book."

Rule 48 - L'Imparfait

1. Conjugaison de l'Imparfait

The "Imparfait" is formed by adding the following endings to the stem of the first person plural of the present tense.

The endings for all "Imparfait" forms are:

Singular	je	+ stem + ais
	tu	+ stem + ais
	elle, il, on	+ stem + ait
Plural	nous	+ stem + ions
	vous	+ stem + iez
	elles, ils	+ stem + aient

Examples of stems:

Infinitive	Present 1st Per.Pl.	Stem
aller	allons	all-
prendre	prenons	pren-
avoir	avons	av-

Only one verb in the French language offers any irregularity in the stem: the verb être has the special stem et-.

j'étais
il était
tu étais

ils étaient
nous étions
vous étiez

Here are samples of "Imparfait" forms from each group of verbs studied to date:

avoir

j'avais
il avait
tu avais

ils avaient
nous avions
vous aviez

aller

j'allais
il allait
tu allais

ils allaient
nous allions
vous alliez

faire

je faisais
il faisait
tu faisais

ils faisaient
nous faisions
vous faisiez

venir

je venais
il venait
tu venais

ils venaient
nous venions
vous veniez

parler

je parlais
il parlait
tu parlais

ils parlaient
nous parlions
vous parliez

finir

je finissais
il finissait
tu finissais

ils finissaient
nous finissions
vous finissiez

partir

je partais
il partait
tu partais

ils partaient
nous partions
vous partiez

conduire

je conduisais
il conduisait
tu condusais

ils conduisaient
nous conduisions
vous conduisiez

2. Usage de l'Imparfait

The "Imparfait" is a past tense used:

a. To express a state of being.

Que faisiez-vous avant cela?	"What did you do before that?"
Je n'y pensais pas.	"I wasn't thinking about it."

b. To indicate that an action was repeated in the past, corresponding to the English *used to* or *would*.

Nous *allions* souvent au cinéma.	"We would often go to the movies."
Les magasins *fermaient* à 9 heures.	"The stores used to close at 9."

c. To describe the setting of a situation at the time something happened.

Quand nous l'avons vu, il *faisait* des courses.	"When we saw him, he was shopping."
Je *téléphonais* quand il est entré.	"I was telephoning when he came in."

(The use of the "Imparfait" versus the "Passe compose" will be studied separately in Rule 53).

d. To make a suggestion or a supposition.

Si je lui téléphonais?	"Suppose I phone him."
Si nous *allions* déjeuner?	"Suppose we go to lunch."
Si j'*étais* à votre place . . .	"If I were you . . ."

Notice that the "Imparfait" expresses facts that existed or happened in the past but without a limitation of time.

Rule 49 - Pronoms Toniques

Pronouns referring to people can be classified into three groups: Subject Pronouns, Object Pronouns and Tonic Pronouns.

Subject Pronouns	Object Pronouns	Tonic Pronouns
je	me	moi
il	le	lui
elle	la	elle
on	se	soi
tu	te	toi
ils	les	eux
elles	les	elles
nous	nous	nous
vous	vous	vous

The Tonic Pronouns are the *stressable* pronoun forms. They occur:

1. After prepositions:

Voulez-vous déjeuner avec moi?
Mon frère et ma soeur sont avec eux.
J'ai rendez-vous avec lui à quatre heures.
Doit-elle habiter chez vous?

2. Before and after que "than," et "and":

Votre soeur doit etre aussi plus jolie qu'elles.
"Your sister must also be prettier than they are."

Marie téléphone moins souvent que lui.
"Marie calls less often than he does."

Vous et moi, nous pouvons partir plus tard.
"We can leave later, you and I."

3. After ce + être:

Qui est la? - C'est moi.	"Who's there?" - "I am." (Me.)
C'est nous qui partons.	"We're the ones who are leaving."
Est-ce vous?	"Is it you?"
C'était lui.	"It was he." (It was him.)
Etait-ce elle?	"Was it she?" (Was it her?)
Est-ce que ce sont eux?	"Is it they?" (Is it them?)
Est-ce que ce sont elles?	"Is it they?" (Is it them?)

Note the plural verb-form, in affirmative only, of third person plural:

Ce sont eux.	"It is they." (It's them.)
Ce sont elles.	"It is they." (It's them.)

4. In isolation (absence of verb):

Qui est la? - Moi.	"Who's there?" - "I am." (Me.)
Vous?	"You?"
Eux aussi.	"They, too." (Them, too.")

5. Before a Subject Prounoun for emphasis:

Je suis resté. Vous, vous êtes parti.
"I stayed. You left."

Moi, je suis resté. Lui, il est parti.
"I stayed. He left."

Of if the Subject Pronoun is understood:

Pas moi. Lui.
"Not I. He." (Not me, him.)

6. After an Affirmative Imperative, the form moi occurs when it is the last pronoun.

Apportez-moi des Gauloises, s'il vous plait.
but:
Apportez-m'en s'il vous plait.

7. Before même "self:"

Je l'ai envoyé moi-même.	"I sent it myself."
Il y va lui-même.	"He's going there himself."

Rule 50 - Negative Expression: Ne . . . Que

There are, besides ne . . . pas, other negative expressions:

Je ne bois jamais rien avant les repas.
Il ne recoit personne après quatre heures.

We are now going to study the expression ne . . . que (only) which in spite of the "ne" has more of a restrictive than a negative meaning.

Je n'ai lu que la rubrique sportive.
Le facteur ne passe qu'a une heure.
Il ne fait que travailler.

In the examples above, "ne" precedes the verb and "que" follows it immediately. However, it is essential to remember that one or more expletive phrases can be placed between the "ne + verb" and the "que."

Il ne prend le train de 19 heures qui arrive a minuit que s'il n'est pas pressé.
Je n'achète les chaussures que je préfère mais qui sont aussi très chères que lorsqu'elles sont en solde.

Ne . . . que is also used in negative sentences.

Il ne boit pas que du vin.
Il n'a pas dit que ca.

(Other negative constructions will be treated in Rules 70, 80, 81 .)

Rule 51 - Adverbes

Most adjectives may have, added to their feminine form or to a special stem, the invariable suffix -ment often corresponding to English -ly.

nécessaire	"necessary"	nécessaire	"necessarily"
facile	"easy"	facilement	"easily"
fausse	"false"	faussement	"falsely"
douce	"soft"	doucement	"softly"
libre	"free"	librement	"freely"
parfaite	"perfect"	parfaitement	"perfectly"
froide	"cold"	froidement	"coldly"
deuxième	"second"	deuxièmement	"secondly"
récente	"recent"	récemment	"recently"

The meanings of these adverbs in -ment do not always correspond to those of the adjectives:

bonne	"good" (tout)	bonnement	"simply"
autre	"other"	autrement	"otherwise"
heureuse	"happy"	heureusement	"fortunately"
longue	"long"	longuement	"at length"
prochaine	"next"	prochainement	"soon"
seule	"alone"	seulement	"only"
dernière	"last"	dernierement	"recently"
joli	"pretty,nice"	joliment	"very"
sure	"sure"	surement	"definitely"
actuelle	"present"	actuellement	"now"

Adverbs occur in one of three places in a French utterance whether the sentence is affirmative, negative or interrogative.

Initially: Généralement, il arrive à l'heure.
"Generally, he arrives on time."

Post verbally: Il arrive généralement à l'heure.
"He arrives generally on time."
Il a certainement téléphoné.
"He has certainly telephoned."

Finally: Il arrive à l'heure, généralement.
"He arrives on time, generally."

Although the possibilities parallel English, the favorite position in French is after the first verb. Although adverbs occur in three positions, not every adverb may occur in all three positions. In compound tenses, adverbs in -ment are often placed between the auxiliary and the verb:

J'ai completement oublié de le faire.
"I completely forgot to do it."
Nous avons justement fini.
"As a matter of fact, we've finished."

Some adverbs will normally be at the end of the sentence:

Il a parlé lentement.
"He spoke slowly."

Rule 52 - Verbes du Type Vendre

Verbs like vendre form the second largest single verb group in number of verbs.

vendre "to sell"	je vends	ils vendent
	tu vends	elles vendent
	il vend	nous vendons
	elle vend	vous vendez
	on vent	

Past Participle: vendu

Some other verbs having /-d-/ are:

attendre	Nous avons attendu deux heures. "We waited for two hours."
confondre	Je confonds vos deux noms. "I get your two names confused."
descendre	Elles sont descendues dans le jardin. "They went down to the garden."
entendre	J'ai entendu ce qu'il a dit. "I heard what he said."
perdre	Nous avons perdu notre cle. "We lost our key."
rendre	Vous rend-il la monnaie? "Is he giving you back the change?"
repondre	Repondent - ils à notre lettre? "Are they answering our letter?"

Rule 53 - Le Passe Composé et L'Imparfait

One difference between the Passe Composé and the Imparfait lies in the idea of aspect, which is the way a French speaker is forced to look at time, either punctually (Passe Composé) or extensionally (Imparfait).

Use of the Passé Composé "means" that the speaker conceives what he is talking about as a single, completed event.

Qu'avez-vous fait pendant le week-end?
Avez-vous choisi votre dessert?
Ou avez-vous travaillé jusqu'à maintenant?
Nous n'avons vraiment pas mis longtemps.
Je suis allé à Versailles.
Nous avons déjeuné dans un restaurant chinois.
Etes-vous déjà allé à Bruxelles?

Use of the Imparfait "means" that the speaker conceives what he is talking about as:

1. Continuous, habitual or repetitive:

Malgré la pluie, elle n'était pas glissante du tout.
Quand je travaillais chez les Dupont, je sortais le lundi.

(In opposition to a sequence of a single event: J'ai déjeuné à sept heures et je suis parti à huit heures.)

2. Forming a background description for a single past event:

Je suis arrivé au moment ou il partait.	"I arrived at the moment he was leaving."
Je téléphonais quand il est entré.	"I was on the phone when he came in."
Quand le facteur a sonné, nous étions à table.	"We were at the table when the telephone rang."

The occurrence of the Imparfait here shows, in the same utterance, that the event (Passe Compose) occurred against a background (Imparfait).

3. The verb in the Imparfait can express an idea of future, present or past according to the context.

On m'a dit que vous partiez demain.	"I was told you were leaving tomorrow."

On m'a dit qu'elle travaillait ici.	"I was told she worked here."
On m'a dit que ca coutait trop cher.	"I was told it cost too much."

Rule 54 - Pronoms Possessifs

Corresponding to the possessive adjectives (Rule 13), French has a set of possessive pronouns. These two groups of forms parallel English my, mine; your, yours; their, theirs, etc. The possessive pronouns are:

	Singular		Plural	
	Feminine	Masculine	Feminine	Masculine
"mine"	la mienne	le mien	les miennes	les miens
"his, hers"	la sienne	le sien	les siennes	les siens
"theirs"	la leur	le leur	les leurs	
"ours"	la nôtre	le nôtre	les nôtres	
"yours"	la vôtre	le vôtre	les vôtres	

Remember that the gender and number of the possessive pronouns are determined by the gender and number of the "possessed" object it replaces.

Elle montre son passeport.	"She shows her passport."
Elle montre le sien.	"She shows hers."
Il ouvre sa valise.	"He opens his suitcase."
Il ouvre la sienne.	"He opens his."

Rule 55 - Tout, Toute, Tous, Toutes

Tout, toute, tous, toutes can have different meanings according to their role in the sentence. For that reason, we find it easier to study them in three steps.

Step 1 - Tout meaning everything is invariable and can be subject or object.

Tout est ici.	"Everything is here."
Je prends tout.	"I take everything."

Step 2 Tout (masculine form)/ toute (feminine form) meaning: the whole, the entire amount, all (followed by a noun in the singular) modifies a noun in the singular and agrees in gender with the noun it modifies.

J'ai passé toute la journée à travailler.	"I spent the whole days working."
J'ai besoin de tout mon temps.	"I need all my time."

Step 3 a. Tous (masculine form)/ toutes (feminine form) meaning all or all of them modifies a plural noun or pronoun.

J'ai tous mes bagages.	"I have all my bags."
Toutes mes amies sont ici.	"All my friends are here."
Tous les miens sont là.	"All mine are there."

b. Tous (masculine form)/ toutes (feminine form) meaning all of them can refer to items mentioned in a preceding sentence.

J'en approte à tous.	"I'm bringing some to all."

Notice that when tous precedes a noun-marker, the final s is not pronounced.

Rule 56 - Autres Adverbes

The formation of other adverbs from adjectives was discussed previously. Many adverbs have no parallel adjective forms but occur in the same three possible places in the utterance, as described in Rule 51.

Adverbs can be classified according to the kind of information they provide. The groups include:

Adverbs of time

alors	then
aujourd'hui	today
bientôt	soon
déjà	already
demain	tomorrow
encore	still
enfin	finally
longtemps	a long time
maintenant	now
prochainement	in the near future
souvent	often
toujours	always

Adverbs of degree

bien	well
si	so
presque	almost
tout à fait	completely
très	very

Adverbs of quantity

assez	enough
autant	as much, as many
beaucoup	much, many
moins	less

pas mal	quite a few
peu	little, few
plus	more
tant	so much, so many
trop	too much, too many

Notice that when an adverb of quantity precedes a noun, that noun is preceded by de instead of the article. (See Rule 28.)

Most adverbs formed from adjectives + ment are:

Adverbs of manner

certainement	certainly	nouvellement	newly
entièrement	entirely	parfaitement	perfectly
exactement	exactly	seulement	only
généralement	generally	vraiment	really
librement	freely	mal	badly
bien	well		

Rule 57 - Verbes du Type Ecrire

Verbs in this group are characterized by v in the longer stem:

écrire

"to write"

j'écris
il écrit
tu écris

ils écrivent
nous écrivons
vous écrivez

Past participle: écrit

Some other verbs in this group are:

décrire	Décrivez-moi votre appartement. "Describe your apartment to me."
inscrire	Il inscrit son nom dans le livre. "He's entering his name in the book."

Rule 58 - Verbes du Type Mettre

mettre

"to put, to put on" je mets ils mettent

tu mets
il met
elle met
on met

elles mettent
nous mettons
vous mettez

Past participle: mis

There are several verbs which pattern themselves like mettre:

admettre "to admit"	Je n'admets pas qu'il arrive en retard. "I don't allow him to arrive late."
commettre "to commit"	A cause de lui, j'ai commis une erreur. "Becuase of him, I made a mistake."
émettre "to emit"	Ils ont émis de nouveaux billets. "They're issued new bills."
omettre "to omit"	J'ai omis une formalité. "I omitted a step."
permettre "to permit"	Permettez-vous à vos enfants de sortir le soir? "Do you allow your children to go out at night?"
promettre "to promise"	Que leur a-t-il promis? "What did he promise them?"
remettre "to hand over"	Remettez ces lettres à la secrétaire. "Hand these letters to the secretary.
soumettre "to submit"	Il faut soumettre ces papiers au directeur.
transmettre "to transmit"	Transmettez mon meilleur souvenir à vos parents." "Give my best regards to your parents."

Rule 59 - Le Futur

1. Besides the future-time verb phrase "aller + infinitive" discussed in Rule 17 , French has a future tense (le futur). The relationship in meaning between the future verb phrase and the future tense is highly similar to the relationship between the English patterns "I'm going to . ." and "I shall. . ."

The future tense is part of the future system and may be conceived as having two parts:

Future Tense = Future Stem + Future Ending

2. The endings of all future forms are:

je	-ai	ils	-ont
tu	-as	elles	-ont
il	-a	nous	-ons
elle	-a	vous	-ez
on	-a		

3. All future stems end in "r." They can be divided in two main groups (a. and b.), plus a few irregular stems (c.).

a. The whole infinitive serves as the stem for the future tense for verbs whose infinitives end in -ir or -er:

parler	to talk	je parlerai
sortir	to go out	nous sortirons
dormir	to sleep	vous dormirez

b. The final -e is dropped from the infinitive:

prendre	to take	je prendrai
lire	to read	elle lira

c.

Infinitive form		Future stem
aller	to go	ir-
savoir	to know	saur-
avoir	to have	aur-
mourir	to die	mourr-
courir	to run	courr-
pouvoir	to be able	pourr-
être	to be	ser-
voir	to see	verr-
envoyer	to send	enverr-
faire	to do	fer-
venir	to come	viendr-
vouloir	to want	voudr-
devoir	to have to	devr-
recevoir	to receive	recevr-

Rule 60 - Pronoms Relatif: Qui, Que, Ce Qui, Ce Que

A clause is defined as any subject and verb tied. Subjects and verbs are "tied" in French by verb endings.

For example in the utterance, "nous vous voyons" (we see you), nous and voyons are tied by the -ons ending. The form vous is involved in the clause, to be sure, but not by verb-inflection.

Two clauses in French may be joined by relative pronouns. We are going to divide the study of the relative pronouns in four steps. In this grammar point, we will only consider Steps 1 and 2.

Step 1 qui, que

The forms qui (who, which) and que (whom, which, that) may be preceded by:

a. a noun or pronoun
b. ce

qui is always subject of the relative clause.

J'ai une personne qui fera votre affaire.
Le livre qui est sur la table est à moi.
C'est le sien qui est dechire.

que is always object of the relative clause.

C'est un pays que j'aime beaucoup.
Voulez-vous m'indiquer la somme d'argent que vous avez sur vous?
C'est celle que je préfère.

Step 2 ce qui, ce que

When "qui" and "que" refer to some undetermined noun or pronoun, they must be preceded by ce and can then be translated by "what."

Savez-vous ce qu'il veut?
Avez-vous vu ce qui est inscrit?

Notice that in English the relative pronoun is often omitted, but must be used in French.

Rule 61 - Pronoms Relatifs: Qui Et Que Après Préposition

Step 3 qui and que after prepositions (except preposition de-)

When preceded by a preposition the relative pronoun will vary according to whether it refers to people or to things.

a. qui or lequel

C'est l'ami avec lequel j'ai voyagé.
C'est l'ami avec qui j'ai voyagé.

b. lequel

Voila le bureau sur lequel j'ai mis le livre.
C'est l'avion par lequel il est arrivé.

Notice that this relative pronoun agrees in gender and number like the noun-marker "quel" studied in Rule 18. Also note that "que" never occurs after a preposition.

Rule 62 - Pronoms Interrogatifs: Qui, Quoi

We saw in Rule 26, a list of words that we called "question words." Among those were qui (who, whom), que, qu' (what) we call interrogative pronouns.

Que désirez-vous?	What do you wish?
Qui avez-vous vu?	Whom did you see?

In this grammar point, we will study the interrogative pronouns after prepositions.

Qui is used for people.

A qui avez-vous téléphoné?	Whom did you call?
Avec qui va-t-il déjeuner?	With whom is he going to have lunch?

Quoi is used for things.

Par quoi allez-vous commencer?	What are you going to start with?
De quoi parliez-vous?	What were you talking about?

Notice that que is never used after a preposition.

Rule 63 - Verbes du Type Recevoir

Verbs in this group are characterized by v in the longer stem:

recevoir	Je reçois	ils reçoivent
	tu reçois	elles reçoivent
"to receive"	il reçoit	nous recevons
	elle reçoit	vous recevez
	on reçoit	

Past participle: recu

Some other verbs in this group are:

devoir "to have to, to owe"	du	Il doit partir demain. "He must leave tomorrow."
apercevoir "to see, to glimpse"	aperçu	Je l'ai aperçu hier dans la rue. "I saw him yesterday in the street."
concevoir "to conceive"	conçu	Il a conçu un nouveau projet. "He conceived a new plan."
decevoir "to disappoint"	deçu	Vous me décevez. "You disappoint me."
percevoir "to collect, to perceive"	perçu	Le gouvernement perçoit les impots. "The government collects taxes."
boire "to drink"	bu	Que buvez-vous? "What do you drink?"

Rule 64 - Le Conditionnel

The conditional tense belongs to the future system; that is, it is based on the future stem (Rule 59). Only the endings distinguish conditional from future forms:

Conditional Tense = Future Stem + "Imparfait" Endings

The conditional endings are identical for all the verbs in the language:

je	-ais	ils	-aient
tu	-ais	elles	-aient
il	-ait	nous	-ions
elle	-ait	vous	-iez
on	-ait		

Use of the Conditional

1. The conditional corresponds quite well to the English verb phrase "would + infinitive."

Je voudrais une chambre avec salle de bains.
"I would like a room with a bath."

J'aimerais un Dubonnet, garcon.
"I would like a Dubonnet, waiter."

Pourriez-vous commencer demain?
"Would you be able to start tomorrow?"

Je ne sais pas si elle aimerait venir avec nous.
"I don't know if she'd like to come with us."

Rule 65 - Pronoms Interrogatifs: Long Form

In spoken French, besides "qui, que," there are longer forms of the type "qui est-ce qui + verb" which occur at the beginning of the sentence. The first "qui," "qu" may be construed as interrogative and the second "qui," "que" as relative:

Short Form	Long Form
Qui regarde?	Qui est-ce qui regarde?
"Who's looking?"	
Qui regarde-t-il?	Qui est-ce qu'il regarde?
"Who's he looking at?"	
-	Qu'est-ce qui vous convient?
"What suits you?"	
Qu'arrive-t-il?	Qu'est-ce qui arrive?
"What's happening?"	
Que regarde-t-il?	Qu'est-ce qu'il regarde?
"What's he looking at?"	

Notice that only the long form can be used if the subject of the relative clause is a thing:

Qu'est-ce qui vous intéresse?	"What interests you?"
Qu'est-ce qui vous semble important?	"What seems important to you?"
Qu'est-ce qui est déchire?	"What's torn?"

Notice also that both forms can be used with impersonal verbs:

Que reste-t-il?
Qu'est-ce qu'il reste?
Qu'est-ce qui reste?

Que vous faut-il?
Qu'est-ce qu'il vous faut?

Rule 66 - Pronoms Relatifs: Dont

In Rule 61, we studied the relative pronoun after prepositions in general. A special form of the relative pronoun is used with verbs followed by the preposition de. Dont has different equivalents in English.

1. of whom, of which

Elle a trois enfants dont deux vont a l'école.
"She has three children, two of whom go to school."

2. The conditional occasionally occurs in a second clause when the verb of the first clause refers to past time:

Je sais qu'il viendra. "I know he's coming."	Je savais qu'il viendrait. "I knew he would be coming."
Il dit que nous partirons demain. "He says we'll be leaving tomorrow."	Il a dit que nous partirions demain. "He said we would be leaving tomorrow."

Here the conditional may correspond to English "would be . .ing" and this pattern contrasts with the imperfect in a second clause:

Nous sommes surs qu'ils choisiront quelqu'un. "We are sure they will be choosing someone."	Nous etions surs qu'ils choisiraient quelqu'un. "We were sure they would be choosing someone."

Nous étions surs qu'ils choisissaient quelqu'un.
"We were sure they were choosing someone."

3. With certain verbs, the conditional expresses more deference or reserve than the present tense:

Je veux une chambre. "I want a room."	Je voudrais une chambre. "I would like a room."
Pouvez-vous partir ce soir? "Can you leave tonight?"	Pourriez-vous partir ce soir? "Could you leave tonight?"

4. The conditional is also used in reporting style, as in newspapers, to indicate that the information is still uncertain or unofficial:

La situation militaire serait critique.
"The military situation is said to be critical."

Selon les dernières nouvelles métérologiques, nous devrions avoir un beau week-end.
"According to the latest weather forecast, we should have a nice week-end."

Elle serait d'accord pour organiser une reunion du comité.
"Apparently, she agrees to organize a committee meeting."

5. Si clauses.

A frequent and automatic use of the conditional is in sentences introduced by si, when we want to express possibility contrary to fact:

Si + verb in the imperfect, verb in the conditional

S'il faisait beau, nous sortirions.
"If the weather were nice, we would go out."
(We know it is raining and we are not going out.)

The order of these clauses may be reversed, but the internal arrangement of each clause remains the same.

Nous sortirions s'il faisait beau.
"We would go out if the weather were nice."
(Notice that si is followed by the imperfect, not by the conditional.)

Other si clauses:

a. Si + verb in the present, verb in the future.

S'il fait beau, nous sortirons.
"If the weather is nice, we will go out."
(To express a possibility)

b. Si + verb in the present, verb in the present.

Si + verb in the imperfect, verb in the imperfect.

S'il fait beau, nous sortons.
"If the weather is nice, we go out."

S'il faisait beau, nous sortions.
"Whenever the weather was nice, we'd go out."
(To express a repetition in the present or the past. Notice that in this case, si has the meaning of 'when.')

c. Si + verb in the present, verb in the imperative.

Si vous êtes pressé, partez vite.
"If you're in a hurry, go quickly."

When si has the meaning of "whether," it can be followed by various verb tenses, including future or conditional:

Dites-moi si vous serez ici demain.
"Tell me if you'll be here tomorrow."

Ses six pièces, dont deux sont traduites, ont eu
un grand succes.
"His six plays, three of which have been translated,
have been highly successful."

2. of whom, of which, about whom, about which

Voici le livre dont j'ai besoin.
"Here's the book (of which) I (have) need.

Voulez-vous lire le rapport dont je vous ai parlé?
"Do you want to read the report (which) I talked
to you about?"

3. whose, of which

Il s'occupe des refugies dont la famille est
restée à l'étranger.
"He takes care of the refugees whose family stayed
abroad."

Les enfants dont les parents sont absents attendent
ici.
"The children whose parents are absent wait here."

Notice that in all these cases dont immediately follows the noun. If there is no noun mentioned, ce will be used in its place and ce dont will be translated as "what."

J'ai ce dont vous avez besoin.
"I have what you need."

Nous achèterons ce dont il a parlé.
"We will buy what he talked about."

Rule 67 - Lequel, Laquelle, etc.

In Rule 61, we studied the relative pronouns "lequel, laquelle, etc. . " The same form also occurs initially as an interrogative pronoun preceded or not by a preposition. It always refers to a specified noun, reiterating its gender and number, and means "which one."

Il y a plusieurs exemplaires; lequel avez-vous?
"There are several copies; which one do you have?"

Nous avons beaucoup de fiches; desquelles avez-vous besoin?
"We have many forms; which one do you need?"

Il y a plus d'un vendeur; auquel avez-vous parlé?
"there's more than one salesman; which one did you
talk to?"

Rule 68 - Verbes du Type Prendre

prendre	Je prends	ils prennent
"to take"	tu prends	elles prennent
	il prend	nous prenons
Future stem: *Prendr-*	elle prend	vous prenez
	on prend	
Past participle: *pris*		

Other verbs which pattern themselves like *prendre* include:

comprendre "to understand"	J'ai tout compris. "I understood everything."
surprendre "to surprise"	Cette nouvelle me surprend. "This news surprises me."
apprendre "to learn"	Je l'apprendrai par coeur. "I'll learn it by heart."

Rule 69 - Verbes Pronominaux

1. Some verbs are conjugated with two pronouns, one subject pronoun and one object pronoun.

s'asseoir	je m'assieds	ils s'asseyent
"to sit"	tu t'assieds	elles s'asseyent
	il s'assied	nous nous asseyons
	elle s'assied	vous vous asseyez
	on s'assied	

2. Among those, we should consider two different types: a. Reflexive verbs and b. Non-reflexive verbs.

a. *Reflexive verbs*

Those verbs can either reflect the action of the subject on the subject itself:

Je me lave. "I'm washing."	Elle se regarde. "She's looking at herself."

or reflect the action of several subjects on one another:

Nous nous regardons. "We look at one another."	Ils se parlent. "They're talking to each other."

b. *Non-reflexive verbs*

Among those, some verbs are always conjugated with an object pronoun which is an inherent part of the verb:

se souvenir "to remember"	Je ne me souviens pas de lui. "I don't remember him."
s'en aller "to leave"	Allez-vous en! "Go away!"
s'y connaître "to be knowledgeable on"	Elle s'y connait en mécanique. "She knows about mechanics."

3. Some verbs are only occasionally conjugated with an object pronoun, in which case they change meaning:

entendre	Je l'entends tres bien.
"to hear"	"I hear it very well."
s'entendre	Je m'entends tres vien avec lui.
"to get along"	"I get along very well with him."
douter	Il doute de tout.
"to doubt"	"He doubts everything."
se douter de	Il se doute de quelque chose.
"to suspect"	"He suspects something."
plaindre	Je la plains.
"to pity"	"I pity her."
se plaindre	Je me plains a elle.
"to complain"	"I complain to her."

4. Some verbs can be used pronominally to express a passive form:

Le vin se vend bien cette année.	"Wine is selling well this year."
Ca se trouve n'importe où.	"You can find it anywhere."
Ce papier se déchire facilement.	"This paper tears easily."
Ca s'enlève a l'eau froide.	"It can be removed with cold water."

Rule 70 - Rien, Personne: Négative

In this rule, we will study two indefinite pronouns:

Step 1 - Rien
Step 2 - Personne

Step 1 Rien: nothing, not . . . anything

Rien can be used:

a. before a verb, as subject followed by ne.

Rien ne lui plait.	"Nothing pleases him."

b. after a verb, as object; the verb is preceded by ne.

Il ne voit rien.	"He doesn't see anything."

In the "passe compose", rien is placed between the auxiliary verb and the past participle. If the verb takes a preposition, rien is placed after the whole verb.

Il n'a rien vu.	"He didn't see anything."
Il ne s'est débarrassé de rien.	"He didn't get rid of anything."

c. in front of an infinitive.

Il vaut mieux ne rien dire.	"It's better not to say anything."

d. without a verb.

Rien.	"Nothing."
Rien que des effets personnels.	"Nothing but personal effects."

Rien is followed by de before a masculine singular adjective.

Rien de nouveau.	"Nothing new."

Rien can also be used as a noun.

Il y a des petits riens qui font plaisir.	"There are little things that make you happy."
Ce n'est pas rien.	"It's nothing to sneeze at."

Step 2 Personne: Nobody, no one, not . . . anybody, not . . . anyone.

Personne can be used:

a. before a verb, as subject, followed by *ne*.

Personne ne comprend. "No one understands."

b. after a verb, as object; the verb is preceded by *ne*.

Il ne voit personne. "He doesn't see anyone."

In the "passé composé," *personne* is placed after the whole verb.

Il n'a vu personne. "He didn't see anyone."

c. without a verb.

Personne. "Nobody."

Personne can also be a noun.

Une personne était là. "A person was there."

Rule 71 - Pronoms Demonstratifs: Celle, Celui

1. Corresponding to English "this one, that one, these, those, the one, the ones" is the set of demonstrative pronouns:

Feminine	Masculine
celle	celui
celles	ceux

2. These forms refer to a specified noun, reiterating its number and gender. They occur before or after a verb (that is, as subject or object of the verb) or after a preposition. These forms must be followed by one of the three following constructions:

a. A clause preceded by a relative pronoun.

Ceux qui viendront sont mes amis.
"Those who will come are my friends."

J'ai celui que vous m'avez donné.
"I have the one you gave me."

b. A prepositional phrase most frequently beginning with *de*.

Celle de ma chambre est verte.
"The one in my bedroom is green."

J'ai celui du bureau.
"I have the one of the office."

c. The suffixes -ci "here" or -la "there."

Ceux-la viendront.
"Those will be coming."

J'ai celui-ci.
"I have this one."

Rule 72 - Le Subjonctif (1)

The subjunctive will be studied in Rules 74, 77, 79, 82, and 84. In this unit, we will study:

Step 1 - The endings of the subjunctive.
Step 2 - Irregular stems.

Step 1 Endings for the present subjunctive tense are as follows:

je _______ e
tu _______ es
il _______ e
elle _____ e
on________ e

il ________ ent
elles _____ ent
nous ______ ions
vous ______ iez

Stems for the subjunctive are usually the same as the ones for the third person plural (ils, elles) of the present indicative:

ils écrivent   il faut que nous écrivions

However, some verbs have a different stem for the 1st and 2nd persons plural (nous, vous).

venir	que je vienne	qu'ils viennent
	que tu viennes	qu'elles viennent
	qu'il vienne	que nous venions
	qu'elle vienne	que vous veniez
	qu'on vienne	
prendre	que je prenne	qu'ils prennent
	que tu prennes	qu'elles prennent
	qu'il prenne	que nous prenions
	qu'elle prenne	que vous preniez
	qu'on prenne	

devoir	que je doive	qu'ils doivent
	que tu doives	qu'elles doivent
	qu'il doive	que nous devions
	qu'elle doive	que vous deviez
	qu'on doive	

Step 2 A few verbs have a totally different stem for the subjunctive:

faire	fass-
savoir	sach-
pouvoir	puiss-
pleuvoir	pleuve
falloir	faille

Notice that the following verbs also have a different stem for the 1st and 2nd person plural.

valoir	que je vaille	qu'ils vaillent
	que tu vailles	qu'elles vaillent
	qu'il vaille	que nous valions
	qu'elle vaille	que vous valiez
	qu'on vaille	
aller	que j'aille	qu'ils aillent
	que tu ailles	qu'elles aillent
	qu'il aille	que nous allions
	que'elle aille	que vous alliez
	qu'on aille	
vouloir	que je veuille	qu'ils veuillent
	que tu veuilles	qu'elles veuillent
	qu'il veuille	que nous voulions
	qu'elle veuille	que vous vouliez
	qu'on veuille	

The forms for *avoir* and *être* are as follows:

être	que je sois	qu'ils soient
	que tu sois	qu'elles soient
	qu'il soit	que nous soyons
	qu'elle soit	que vous soyez
	qu'on soit	
avoir	que j'aie	qu'ils aient
	que tu aies	qu'elles aient
	qu'il ait	que nous ayons
	qu'elle ait	que vous ayez
	qu'on ait	

Rule 73 - Verbes du Type Craindre

craindre "to fear"	je crains tu crains il craint elle craint on craint	ils craignent elles craignent nous craignons vous craignez

Past participle: craint

Notice that these verbs are characterized by gn in the plural stem.

Other verbs which pattern themselves like "craindre" include:

peindre "to paint"	Elle peint la cuisine. "She's painting the kitchen."
teindre "to dye"	Il a teint sa chemise. "He dyed his shirt."
éteindre "turn out" (Light)	N'oubliez pas d'éteindre. "Don't forget to turn out the lights."
atteindre "to reach"	Ils ont atteint leur but. "They reached their goal."
déteindre "to lose color"	Ces couleurs déteignent. "Those colors run."
plaindre "to pity"	Je vous plains. "I feel sorry for you."
se plaindre "to complain"	Il se plaint toujours. "He's always complaining."
rejoindre "to join, to catch up"	Partez, je vous rejoindrai plus tard. "Go ahead, I'll catch up with you later."
se joindre à "to join"	Je me joins à eux pour vous présenter mes meilleurs voeux. "I join them in wishing you all the best."

Rule 74 - Le Subjonctif: Verbes Impersonnels (2)

The subjunctive is used after certain impersonal verbs and expressions which usually indicate emotion, doubt, denial, volition, necessity, etc.

Notice that the expressions marked by an asterisk require a more emphatic intonation.

Rule 75 - Le Plus-que-Parfait et Le Conditionnel Passé

Pluperfect - In Rule 34, we studied the "passé composé" (il a téléphoné) and the imperfect (il téléphonait quand je suis arrivée). (See Rule 53).

To express that an action was anterior to a past action, we use a compound tense, the pluperfect, called in French "plus-que-parfait." The pluperfect is formed by using the past participle of the verb preceded by the imperfect of the auxiliary.

Il avait déjà téléphoné quand je suis arrivée.	"He had already telephoned when I arrived."
Il était déjà parti quand je suis arrivée.	"He had already left when I arrived."

Past conditional - In Rule 64, we studied the present conditional (J'aimerais un Dubonnet, garçon) and its use to express a possibility contrary to fact.

S'il faisait beau, nous sortirions.	"If the weather were nice, we would go out."

To express that same idea in the past, we have to use:

Si + verb in the pluperfect, verb in the past conditional.

S'il avait fait beau, nous serions sortis.	"If the weather had been nice, we would have gone out."

The past conditional is formed by using the past participle of the verb preceded by the present conditional of the auxiliary.

Nous aurions téléphoné.	"We would have telephoned."
Nous serions partis.	"We would have left."

Rule 76 - Accord du Participe Passé

In Rules 34 and 39, we learned that the "passé composé" was formed by using the past participle preceded by the present tense of the auxiliaries "avoir" and "être." The past participle agrees in gender and number according to a set of rules.

Here is a list of the ones most frequently used:

1.	Il est bizarre que	It is strange that
2.	Il est bon que	It is good that
3.	Il est douteux que	It is doubtful that
4.	Il est essentiel que	It is essential that
5.	Il est étonnant que	It is amazing that
6.	Il est étrange que	It is strange that
7.	Il est extraordinaire que	It is extraordinary that
8.	Il est heureux que	It is fortunate that
9.	Il est important que	It is important that
10.	Il est impossible que	It is impossible that
11.	Il est inconcevable que	It is inconceivable that
12.	Il est injuste que	It is unfiar that
13.	Il est inutile que	It is useless that
14.	Il est invraisemblable que	It can't be true that
15.	Il est juste que	It is only fair that
16.	Il est malheureux que	It is unfortunate that
17.	Il est nécessaire que	It is necessary that
18.	Il est normal que	It is normal that
19.	Il est peu probable que	There is little likelihood that
20.	Il est possible que	It is possible that
21.	Il est preferable que	It is preferable that
22.	Il est rare que	Rarely do . . .
23.	Il est regrettable que	It is regrettable that
24.	Il est surprenant que	It is surprising that
25.	Il est temps que	It is time that
26.	Il est tout naturel que	It is quite natural that
27.	Il est utile que	It is useful that

1.	Ca vaut la peine que	It is worthwhile that
2.	Ce n'est pas la peine que	It is not worth that
3.	C'est dommage que	It is too bad that
4.	Comment se fait-il que	How come
5.	Il faut que	It is necessary that, . . . must
6.	Il n'y a pas de danger que	There is no chance that
7.	Il s'en est fallu de peu que	(I) came close to
8.	Il se peut que	It may be that
9.	Il suffit que	Whenever . . ., All (you) have to do is
10.	Il vaut mieux que	It is better that
11.	Il y a un inconvenient a ce que	There is an objection to

*1.	C'est absurde que	It is absurd that
*2.	C'est bizarre que	It is strange that
*3.	C'est drôle que	It is funny that
*4.	C'est ennuyeux que	It is annoying that
*5.	C'est fantastique que	It is fantastic that
*6.	C'est formidable que	It is fantastic that
*7.	C'est terrible que	It is terrible that

verbs are conjugated with the auxiliary "être" or "avoir."

a. The past participle of verbs conjugated with *etre* agrees in gender and number with the subject:

Elles sont parties.	"They left."
Ils sont descendus.	"They've gone down."

b. The past participle of verbs conjugated with *avoir* agrees with the direct object of the verb if that object precedes the verb:

Les journaux que j'ai lus.	"The newspapers I read."
La route que j'ai prise.	"The road I took."
Ces livres, ou les avez-vous trouvés?	"These books, where did you find them?"

but:

J'ai lu les journaux.	"I read the newspapers."
J'ai pris cette route.	"I took this road."
Ou avez-vous trouvé ces livres?	"Where did you find these books?"

There is no agreement if *en* is the direct object pronoun:

J'en ai traduit.	"I translated some."
but: Je les ai traduites.	"I translated them."

There is usually no agreement if the past participle is followed by an infinitive:

C'est la lettre qu'il a fait taper.	"It is the letter he had typed."
but: C'est la lettre qu'il a tapée.	"It is the letter he typed."

Rule 77 - Le Subjonctif (3)

The following list includes the most commonly used verbs requiring a subjunctive: verbs + que + subjonctif.

aimer que	to love, to like
aimer mieux que	to prefer
attendre que	to wait
avoir de la chance que	to be lucky
avoir intérêt à ce que	to be in one's interest
avoir peur que	to be afraid

comprendre que	to understand
craindre que	to fear
demander que	to ask
désirer que	to wish, to desire
douter que	to doubt
être content que	to be pleased
être decu que	to be disappointed
être desole que	to be sorry
être etonne que	to be surprised
être heureux que	to be happy
être surpris que	to be surprised
exiger que	to demand
insister pour que	to insist
mériter que	to deserve
préférer que	to prefer
proposer que	to suggest
regretter que	to regret
souhaiter que	to wish
tenir à ce que	to want very much, to insist
trouver + adjectif (bizarre, etc.)	to find + adjective (odd, etc.)
s'attendre à ce que	to expect
s'étonner que	to be surprised
s'opposer à ce que	to be against
veiller à ce que	to see to it
voir un inconvenient à ce que	to see an objection to

Notice that "ce que" is used after verbs followed by a preposition.

Rule 78 - Verbes du Type Ouvrir

ouvrir	j'ouvre	ils ouvrent
"to open"	tu ouvres	elles ouvrent
	il ouvre	nous ouvrons
	elle ouvre	vous ouvrez
	on ouvre	

Future stem: ouvrir-

Past participle: ouvert, ouverte

Other verbs which pattern themselves like ouvrir include:

offrir "to offer"	Puis-je vous offrir quelque chose? "May I offer you something?"
souffrir "to suffer"	Il n'a pas beaucoup souffert. "He didn't suffer much."
couvrir "to cover"	Couvrez-vous bien! "Dress warmly!"
découvrir "to discover, to find out"	On les a découvertes l'année dernière. "They were discovered last year." J'ai découvert qu'il s'était trompé. "I found out he had made a mistake."

Rule 79 - Le Subjonctif (A)

The subjunctive is used after certain conjunctions.

à condition que		provided that
afin que		in order that
à moins que		unless
avant que		before
bien que		even though, although
de crainte que		for fear that, lest
de peur que		for fear that, lest
de façon que		so that
en attendant que		while waiting
jusqu'à ce que		until
pour que		in order that
pourvu que		provided that, let's hope that
que . . . ou		whether . . . or
quoique		even though
sans que (ne)		without
où que		wherever
quel que	pronoms relatifs	whichever
qui que	indefinis	whoever
quoi que		whichever

The following conjunctions do not require the subjunctive.

pendant que	while
alors que	whereas, while
tandis que	whereas, while
aussitôt que	as soon as
dès que	as soon as
du moment que	as long as
tant que	as long as
lorsque	when
après que	after
peut-être que	maybe
sans doute que	probably
depuis que	since
etant donné que	since
d'autant plus que	especially since
vu que	considering that

Rule 80 - Autres Adverbes Negatifs

In Rule 7 we studied the negative adverb "ne . . . pas" and in Rule 70, "ne . . . rien," "ne . . . personne." In this rule, we will study:

ne . . . plus	"no longer," "not . . . anymore"
ne . . . jamais	"never"

In non-compound tenses the sequence will be:

subject + ne + (obj.pr. if any) + verb + plus . . .

Je n'en envoie plus à l'étranger.	"I don't send any abroad anymore."

In compound tenses the second part of the negation will be placed between the auxiliary and the verb.

Je n'en ai plus envoyé à l'étranger.	"I haven't sent any abroad anymore."

Combinations of negative adverbs are frequent:

Il ne vient jamais personne.	"No one ever comes."
On ne les invitera plus jamais.	"We'll never invite them again."
Ils ne vérifient jamais rien.	"They never check anything."
Je ne dirai jamais plus rien.	"I'll never say anything anymore."

When the infinitive is negated, all elements of the negation precede the infinitive.

Il a promis de ne plus jamais y aller.	"He promised never to go there again."

Examples:

1.	Je ne travaille plus.	"I don't work anymore."
2.	Je n'ai plus de travail.	"I have no more work."
3.	Je ne veux plus rien.	"I don't want anything anymore."
4.	Plus rien ne marche.	"Nothing works anymore."
5.	Plus personne ne s'en occupe.	"Nobody takes care of it anymore."
6.	Je ne connais plus personne.	"I don't know anybody anymore."

1.	Nous n'avons jamais d'ennuis.	"We never have any troubles."
2.	Ca ne marchera jamais.	"It will never work."
3.	Ca n'arrivera plus jamais.	"It will never happen again (anymore)."
4.	Je ne dirai jamais plus rien.	"I'll never say anything anymore.
5.	Je ne vois jamais plus personne.	"I don't see anyone anymore."
6.	Il ne dit jamais rien.	"He never says anything."
7.	Il vaut mieux ne plus jamais rien dire.	"It's better not to say anything ever again."

Les exemples du point de grammaire ci-dessus ne sont pas a présenter comme exercises. Commencer par les exercices de présentation.

Rule 81 - Aucun, Aucune: Négatif

Aucun, Aucune are usually used with ne before the verb and have a negative meaning. Whether it is adjective or pronoun, it varies in gender.

Aucun appareil ne marche.	"Not a single appliance is working."
Nous n'en avons aucune idée.	"We don't have any idea."
Il n'en a trouvé aucun.	"He didn't find a single one."
Il n'en a trouvé aucune.	"He didn't find a single one."

When aucun, aucune are object pronouns, the pronoun en has to be used before the verb.

Je n'en ai vu aucun.	"I didn't see a single one."

Like *rien* and *personne*, *aucun*, *aucune* cannot be used with *pas*. However, it can be used with *plus* and/or *jamais*.

Je n'en ai plus aucun.	"I don't have a single one anymore."
Je n'en ai plus jamais aucun.	"I never have a single one anymore."

Rule 82 - Le Subjonctif (5)

Some expressions of comparison are structured exactly like a superlative form. They are in reality comparative forms and are especially difficult to recognize out of context.

Emploi du subjonctif après un superlatif et après "le seul," "le premier," "le dernier" suivis d'un pronom relatif.

Examples:

Question: Laquelle de ces deux filles connaissez-vous?
Answer : Je connais la plus grande. (I know the taller one.)

Question: Laquelle de ces deux jeunes filles connaissez-vous? La plus petite?
Answer : Non, je connais la plus grande.
ou: Non, c'est la plus grande que je connais. (It's the taller one I know.)

Question: Vous n'en connaissez pas de plus grandes?
Reponse : Non, c'est la plus grande que je connaisse. (She's the tallest I know.)
ou: Non, je n'en connais pas de plus grandes. (I don't know any taller ones.)

1. A superlative followed by a relative pronoun requires the subjunctive.

C'est la plus jolie que je connaisse.	"She's the prettiest I know."

2. "Le seul," "le premier," "le dernier" followed by a relative pronoun require the subjunctive.

C'est le seul qui soit disponsible.	"He's the only one who is available."
C'est le premier qui me plaise.	"He's the first one I like."
C'est le dernier qui puisse nous aider.	"He's the last one who could help us."

However, the superlative, "le premier" and "le dernier" take the indicative if they represent part of a series.

C'est le premier que nous voulons; pas l'autre.	"It's the first one we want; not the other one."

Notice that "la première fois" and "la dernière fois" never take the subjunctive.

C'est la première fois que j'y vais.	"It's the first time I'm going there."
C'est la dernière fois qu'il fait ce voyage.	"It's the last time he's going on that trip."

Rule 83 - C'est et Il Est

The examples that follow illustrate the use of "c'est" versus "il est" (meaning *it*) when *it* does not replace a previously mentioned subject.

Ce que vous faites est dangereux.	C'est dangereux. (indefinite)
Cet homme est dangereux.	Il est dangereux. (definite)
Ce qu'il y a dans la valise est lourd.	C'est lourd. (indefinite)
Ce que vous faites ne sert à rien.	Ca ne sert à rien. (indefinite)
Cette valise est légère.	Elle est légère. (definite)

Il y a beaucoup de circulation sur cette route; c'est dangereux.
Il y a beaucoup de circulation sur *cette route*; elle est dangereuse.
Conduire à toute vitesse sur le verglas, c'est dangereux.
N'allez pas dans *ce restaurant*; il est tres cher.
Aller souvent au restaurant, c'est cher.

The examples below show another aspect of the question. When the adjective is followed by the preposition *a*, "il," "elle," or "c" replace a specific subject. When the adjective is followed by the preposition *de*, "il" (meaning *it*) conveys an impersonal meaning.

L'auto est facile à conduire.
Le camion est difficile à conduire.

Elle (l'auto) est facile à conduire.
Il est facile de conduire l'auto.
Il est facile de la conduire.
C' (une auto en général) est facile à conduire.

Il (le camion) est difficile à conduire.
Il est difficile de conduire le camion.
Il est difficile de le conduire.
C' (un camion en général) est difficile à conduire.

Rule 84 - Le Subjunctif (6)

The subjunctive is used after the relative pronouns when the noun it replaces is preceded by an indefinite noun marker (i.e., un, plusieurs, quelques, etc.) or a number, and the verb in the main clause implies a doubt about the outcome.

Je cherche quelqu'un qui puisse m'accompagner.	"I'm looking for someone who could accompany me."
Je voudrais des chaussures qui m'aillent.	"I would like shoes that fit."

(It implies that the subject is not sure to find such a person, a thing.)

The subjunctive is also used after the relative pronouns when certain verbs in the main clause are used negatively or interrogatively.

En connaissez-vous qui en vaillent la peine?	"Do you know any that are worthwhile?"
Je n'ai rien troube qui m'ait plu.	"I didn't find anything I liked."

APPENDIX C

FRENCH RULES MATRIX

RECURRING DATA ANALYSIS

1. SUBJECT OF ANALYSIS OR ACTIVITY:

OUTLINE OF FRENCH RULES; RECURRING DATA ANALYSIS OF FRENCH RULES KEYED TO TEXTBOOKS, AS REQUIRED.

2. ANALYZED BY: H. E. Branham, Jr.

3. DATE: Mar 80

FRENCH LANGUAGE TEXTBOOKS

NO.	FRENCH RULES	BASIC FRENCH COURSE No. 1	LANGUE ET LANGAGE No. 2	PAROLE ET PENSEE No. 3	ALM FRENCH No. 4	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	TOTAL
1	Definite Articles	10	8	10												
2	Subject Pronouns	17	9	27												
3	Inversion Questions	17	27	42												
4	The Verb: Etre	20	17	47												
5	Indefinite Articles	39	7	6												
6	Cardinal Numbers	42	6	11												
7	Negative Adverb: Ne Pas	44	7	39												
8	The Verb: Avoir	48	41	69												
9	Demonstrative Adjectives	67	20	113												
10	The Preposition: A	71	31	---												

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RECURRING DATA ANALYSIS

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FRENCH LANGUAGE TEXTBOOKS

NO.	FRENCH RULES	BASIC FRENCH COURSE No. 1	LANGUE ET LANGAGE No. 2	PAROLE ET PENSEE No. 3	ALM FRENCH No. 4	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	TOTAL
11	Yes/No Questions	73	18	42												
12	Verbs Ending in - ER	77	72	148												
13	Possessive Adjectives	100	74	53												
14	Indefinite Articles	105	9	19												
15	Numbers to 100	108	---	11 82												
16	Prepositions: Chez/A	113	76	---												
17	The Verb: Aller	115	438	135												
18	Indefinite Adjectives	136	---	---												
19	Negative Constructions	141	43	---												
20	Large Numbers	144	---	---												

RECURRING DATA ANALYSIS

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21	Impersonal Verbs	148	---	---												
22	The Verb: Faire	150	446	134												
23	Adjectives - Forms	184	74 112	37												
24	Object Pronouns	191	120	156												
25	Subject Pronouns: Ce	199	20	113												
26	Question-Words	208	---	42												
27	The Verbs: Pouvoir, Vouloir, Savoir	212	440 442	219												
28	Adjectives - Position	236	112	37 38												
29	Object Pronouns: Lui, Leur	240	---	---												
30	Object Pronouns: En, Y	245	31	169												

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31	Imperatives	258	105	136												
32	Verbs ending in - IR	263	181	189												
33	Comparative and Superlative	286	86	88												
34	Passé Composé (Avoir)	293	141	140												
35	Object Pronouns - Order	304	---	---												
36	Adjective - Noun Plural	318	75	---												
37	Verbs endind in - IRE	320	---	---												
38	Comparatives and Superlatives - Irreg	343	86	88												
39	Passé Composé (Etre)	351	152	233												
40	Expressions of Quantity	356	---	250												

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41	Expressions of Quantity with - EN	360	168	175												
42	Verbs Ending in - IR (Partir)	365	121	---												
43	Infinitive Verb Phrases	391	169	---												
44	Object Pronouns - Infinitive Verb Phrases	395	---	244												
45	Essential Object Pronouns	405	---	---												
46	Expanded Noun Phrases	409	---	---												
47	Verbs like Venir	412	124	135												
48	L'Imparfait	11	148	233												Basic French Vol II
49	Pronoms Toniques	19	300	390												
50	Negative Expression: Ne. . . Que	24	192	99												

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RECURRING DATA ANALYSIS

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51	Adverbes	31	112	110												
52	Verbes du type Vendre	34	444	---												
53	Le Passé Composé et L'Imparfait	60	148	243												
54	Pronoms Possessifs	68	205	294												
55	Tout, Toute, Tous, Toutes	72	105	137												
56	Autres Adverbes	80	172	150												
57	Verbes du type Ecrire	83	446	---												
58	Verbes du type Mettre	108	446	---												
59	Le Futur	112	202	269												
60	Pronoms Relatifs: Qui, Que, Ce Qui, Ce Que	125	314	106												

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61	Pronoms Relatifs: Qui & Que Apres Preposition	134	220	106												
62	Pronoms Interrogatifs: Qui, Quoi	141	220	447												
63	Verbes du type Recevoir	168	442	---												
64	Le Conditionnel	172	374	406												
65	Pronoms Interrogatifs: Long Form	183	316	443												
66	Pronoms Relatifs: Dont	189	221	406												
67	Lequel, Laquelle, Etc.	194	295	286												
68	Verbes du type Prendre	221	442	---												
69	Verbes Pronominaux	226	259	348												
70	Rien, Personne: Negatif	239	190	331												

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71	Pronoms Demonstratifs: Celle, Celui	248	313	293												
72	Le Subjonctif (1)	254	339	467												
73	Verbes du type Craindre	320	442	---												
74	Le Subjonctif: Verbes Impersonnels (2)	323	336	473												
75	Le Plus-que-Parfait et le Conditionnel Passé	331	280	307												
76	Accord du Participe Passé	337	149	242												
77	Le Subjonctif (3)	342	---	---												
78	Verbes du type Ouvrir	369	440	---												
79	Le Subjonctif (4)	371	359	506												
80	Autres Adverbes Négatifs	378	---	326												

RECURRING DATA ANALYSIS

FRENCH LANGUAGE TEXTBOOKS

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81	Aucun, Aucune: Negatif	402	235	---												
82	Le Subjonctif (5)	408	---	473												
83	C'est et Il est	412	---	---												
84	Le Subjonctif (6)	442														

APPENDIX D

THE FRENCH EXAMINATIONS OF THE COLLEGE BOARD AND CLEP TESTS

THE FRENCH EXAMINATIONS OF THE COLLEGE BOARD

The College Board offers four examinations in French:*

1. Admissions Testing Program (ATP) Achievement Test in French
2. Advanced Placement Program (APP) Examination in French Language
3. Advanced Placement Program (APP) Examination in French Literature
4. College-Level Examination Program (CLEP) Subject Examination in College French - Levels 1 and 2

Test	Coverage	Format
ATP Achievement Test in French	Reading skill tested through vocabulary, structure, and reading comprehension	60 minutes: 90 multiple-choice questions
APP Examination in French Language	Competency in listening, reading, writing, and speaking comparable in content and in difficulty to a third-year college course in advanced French composition and conversation.	150 minutes: 30 minutes listening 40 multiple-choice questions 60 minutes reading 60 multiple-choice questions 45 minutes writing sentence completion plus composition 15 minutes speaking student-recorded responses
APP Examination in French Literature	One-year introductory college course to provide motivated students with an intellectual challenge through the advanced study in French Literature and Language	180 minutes: 80 multiple-choice questions (15 based on a recorded lecture) 2 essays (written in French)

Test	Coverage	Format
CLEP Subject Examination in College French - Levels 1 and 2	Listening and reading appropriate to first- and second-year French language courses	90 minutes: 30 minutes listening 55 multiple-choice questions 60 minutes reading 90 multiple-choice questions

*NOTE: Sample tests may be ordered from the College Board Publication Orders, Box 2815, Princeton, New Jersey 08540. Order number, title, and price of available publications and tape recordings can be found in Appendix L of this publication.

CLEP TEST CONTENT SPECIFICATIONS

Examination Characteristics	Listening 30 Minutes	Reading 60 Minutes
Vocabulary mastery: meaning of words, and idiomatic expressions in context of printed or spoken sentences or situations.		17% of questions
Grammatical control: ability to identify usage that is structurally correct and appropriate		28% of questions
Reading comprehension: ability to read passages representative of various styles and levels of difficulty		17% of questions
Single sentences testing phonemic discrimination by means of picture identification	9% of questions	
Short conversations between two speakers based on everyday situations	17% of questions	
Selections to measure student's ability to understand language as spoken by native speakers in longer dialogues and narratives	12% of questions	

CLEP Language Test Characteristics - Levels 1 and 2

The examination in French is designed to measure knowledge and ability equivalent to that of students who have completed two to four semesters of college language study. The Levels 1 and 2 designation indicates that the examination is focused on skills typically achieved from the end of the first year through the secon dyear of college study of the language. Both levels are incorporated into a single examination. Each examination is composed of reading and listening sections.

The CLEP modern language test measures knowledge and ability in the following broad areas:

1. Vocabulary Mastery - Although knowledge of vocabulary is tested implicitly throughout the tests, some questions specifically test word meaning and idomatic expressions as they appear in the written and spoken forms of the language. Words and expressions reflect the vocabulary ususally encountered in the first two years of college language study. Since the extensive vocabulary reflected in the tests is acquiried only through much study and practice, it is improbable that last-minute review of word lists will significantly affect one's performance on any of questions of this test.

2. Grammatical Control - The ability to use correct language patterns is essential to the command of a language. For this reason, a number of questions are designed to test ability to identify usage that is structurally correct and appropriate in context. Questions requiring a knowledge of grammatical terms are not asked.

3. Reading Comprehension - The ability to read with understanding is tested through reading passages taken from a variety of prose styles and levels of difficulty. The questions based on the passages test comprehension of overall meaning as well as of specific details. A few questions test understanding of the author's point of view, the feelings of the characters, or the mood and tone of the passage.

4. Listening Comprehension - The questions in this part of the test are designed to measure the ability to understand the language as used by native speakers in everyday conversation. The candidate listens to recorded materials and selects the response to each question from choices presented either in the test book or on the recording.

Although there is wide variation in the difficulty of individual questions on the test, most are intended to be of moderate difficulty. Since the test is designed to be fair to people who have prepared in different ways or have taken courses at different colleges, it is not expected that everyone taking the tests will be able to answer every question.

APPENDIX E

CAREER EDUCATION AND FRENCH LANGUAGE PREASSESSMENT SURVEY

APPENDIX E

CAREER EDUCATION AND FOREIGN LANGUAGE PREASSESSMENT SURVEY

GENERAL INSTRUCTIONS

1. Complete this survey questionnaire within the time specified by your classroom instructor and return it to him/her upon completion.

2. Instructions for completing each part of this survey are different, therefore, read all instruction/information This survey consists of three parts: 1) biographical; 2) scenario questions; and 3) general.

3. Survey Content:

   a. Part I requests that you furnish biographical information. This information will be used to correlate feedback received from the total surveys administered. Print or check all answers in the spaces provided on the appropriate survey page.

   b. Part II contains a scenario and questions designed to be informative as well as investigative. Answer in a manner consistent with your general overview, to eliminate the possibility of answers that conflict or indicate ambiguity.

   c. Part III consists of general items relative to student outcome objectives that are self-explanatory.

PART I - BIOGRAPHICAL INFORMATION

Name:____ Sex:____
(Last) (First) (MI)

Social Security Number:__________/_____/__________ Age:____

Degree Being Pursued (check one): AA _____, BS______, BGS____

Career Field or Profession:____________________________________

____

Area of Concentration (check one):

Accounting________________

Business/Economics________

Criminal Justice__________

Humanities________________

Social Sciences___________

Math and/or Science_______

Preparation for Teaching__

- Social Studies________
- English_______________
- Humanities____________
- Foreign Languages_____
- Science_______________
- Math__________________
- Business/Economics____

Required under Title VI of Civil Rights Act for U.S Department of HEW (check one):

American Indian______________

Alaskan Native_______________

Asian________________________

Black Non-Hispanic___________

Hispanic_____________________

White Non-Hispanic___________

Please check the items below, as appropriate:

Are you a parent of a child in the secondary or postsecondary school system?

__________Yes __________No

---

1. Are you interested in changing your career field or profession?

   __________Yes __________No If yes, what field?__________

2. If yes, what profession?____________________________________

   ____

PART I - BIOGRAPHICAL INFORMATION (cont'd.)

3. What are your plans with respect to taking college courses after graduation? (circle one)

   a. I do not plan to take any college courses.

   b. I expect I'll take a few college courses, but do not expect to get a Master's Degree.

   c. I expect to get a Master's Degree or other Post-Graduate Degree.

   d. I already have a Master's Degree.

   e. Undecided.

4. Have you ever studied any foreign language?

   __________Yes __________No If yes, please give the information requested below:

Language Studied	When and Where? College, Military, High School	How Long
a.______________	______________________________	______
b.______________	______________________________	______
c.______________	______________________________	______

5. When you were a child, was any foreign language spoken in your home?

   __________Yes __________No If yes, what language was it?

   ____

6. For how many years were you exposed to it? (explain)_____

   ____

   ____

   ____

7. Do you use a foreign language in your career field or profession?

   __________Yes __________No If yes, what language?_______

PART I - BIOGRAPHICAL INFORMATION (cont'd.)

8. Would the use of a foreign language help you in your present work capacity?

__________Yes __________No If yes, does your employer have facilities for providing training?

__________Yes __________No

9. Would you be interested in studying a foreign language?

__________Yes __________No If yes, what language? ______

10. If you are interested in studying a foreign language, would you like to participate in a course using a self-pace/self-instructional method? (check one)

__________Not Interested

__________Definitely Yes

__________Yes

__________No

__________Definitely No

11. If you are interested in studying a foreign language, how would you feel about studying and finishing the course at your own rate of speed, rather than at uniform class speed?

__________I would dislike it very much.

__________I would dislike it somewhat

__________It wouldn't make any difference

__________I would like ti somewhat

__________I would like it very much

__________Not Interested

12. Are you presently teaching in the secondary or post-secondary school system?

__________Yes

__________No

__________No, but in the elementary school system.

PART II - SCENARIO AND QUESTIONNAIRE

Scenario: Norm-Referenced and Criterion-Referenced approach. Instruction adapted to the individual learning rates of students dictates the need for a criterion-referenced approach to evaluation. Non-punitive grading is employed and if students perform poorly on a test it simply means they have not as yet learned, and thus have not as yet been taught. Please consider this dialogue between Mr. Jones the French teacher and Ms. Wright the Spanish teacher.

Mr. Jones: (working at the Xerox machine) I don't know what I'd do without the Xerox machine. This supplemental material keeps the students busy and also simplifies the individualzied instructional package.

Ms. Wright: How do you incorporate supplemental material? The textbook, workbook, and testing material should be sufficient to assess the student.

Mr. Jones: Well, besides the basic drills, each xeroxed set includes a few rule-using and problem-solving narratives in the French language that are difficult but interesting.

Ms. Wright: That looks like an ambitious game plan. But, I use answer cards, pop quizzes, and the automatic grading method, and I don't get caught having to actually speak fluent Spanish. After all, I'm not a native of the language.

Mr. Jones: Oh, I don't mind that. Someone in class helps me out. I think it's good for them to hear me make a mistake in French. They know you can't be perfect, and that you have to learn to find the mistake.

Ms. Wright: I know what you mean. I made plenty of mistakes in Spanish when I tried the inquiry lessons on Latin American Spanish that Raoul Olivella recommended. It just wore me out. Then it was back to the textbook and workbook for the rest of the day for me. In fact, the quiz I gave at the end of the period seemed to be more realistic as far as determining whether or not learning took place.

Mr. Jones: For the first time in years I did not use the pop quiz this semester. I prefer the criterion-referenced testing instead.

PART II - SCENARIO AND QUESTIONNAIRE (cont'd.)

Ms. Wright: I considered criterion-referenced approaches, but I don't think I will ever like the idea of instruction adapted to the individual learning rates of each student. The preparation is just too much. As far as I'm concerned criterion-referenced testing actually assess the teacher rather than the student.

Mr. Jones: Well, I guess I complain about all the work involved, and sometimes I do feel like my teaching is being criticized. But, with the teaching of a foreign language, I don't think that one student's performance should be tested in relation to the performance of another student. So then I waste more of their time and my time adapting my instruction to individual learning rates. In that way I can grade according to the objectives.

Ms. Wright: That may be all well and good, but using the normal curve is my guide in assigning grades - it serves to sort the students. After all, some of them will never be able to speak a foreign language. As far as I'm concerned, some can't even speak English.

Mr. Jones: Maybe you're right, but I think the aptitude of my students will depend a great deal on the time it takes one of them to train for the language requirements and master the objectives.

---

1. Do you find this concern about keeping students busy and productive to be typical of how most teachers feel?

   a._______Yes

   b._______No, they're not concerned.

   c._______No, they're even more concerned.

2. Is it correct to say that Mr. Jones (concerned with criterion-referenced instruction) usually likes packaged and supplemented individualized instruction, but that Ms. Wright (concerned about subject-matter learned) usually does not like such packaged or supplemental instruction?

   a._______Yes, that is correct.

   b._______No, that is wrong.

PART II - SCENARIO AND QUESTIONNAIRE (cont'd.)

3. Do you personally consider it a problem when a student does not participate in class work even if he does not bother other students, and even if he does quite well on the normal grading curve?

   a._______Yes, it's a problem.

   b._______No, that's not a problem.

4. Do you agree with Mr. Jones that it is good for students to observe and correct teacher mistakes?

   a._______Very definitely

   b._______No, it's distracting

5. Do you think that students would lose confidence in a teacher that makes mistakes in class?

   a._______Yes, I would

   b._______Yes, most students would

   c._______No, I wouldn't

   d._______No, most students wouldn't

6. If Mr. Jones does make errors in class, what do you believe to be the best follow-up, in respect to the learning process?

   a._______Errors usually should be corrected immediately and authoritatively.

   b._______Usually students should be allowed to discover errors, and encouraged to discuss them.

7. Why isn't more time spent on the type of teaching advocated by Mr. Jones?

   a._______It is too hard to ask students enough of the right questions.

   b._______Students are too likely to become lazy is they are not threatened with testing to assess their learning.

   c._______The necessary equipment and supplies are too difficult to provide.

   d._______Most students cannot really carry out inquiries effectively.

   e._______Inquiry gives pupils the false impression about what learning is.

PART III - GENERAL ITEMS

1. Are you interested in learning a foreign language?

   a._______Yes, definitely.

   b._______I think I might be.

   c._______Not really.

2. Do you think French is more difficult than German?

   a._______Yes.

   b._______No.

3. Do you think French is more difficult than Spanish?

   a._______Yes.

   b._______No.

4. Have you ever heard French spoken?

   a._______Yes.

   b._______No.

   If yes, where?____

   ____

5. What does French sound like to you?________________________

   ____

6. What is your reaction to French words as these? appartement, restaurant, beauté, baggage, imagination? Can you recognize them?

   a._______Yes.

   b._______No.

7. What is your reaction to words such as these: grenouille, caoutchouc, aujourd'hui, malheureusement, oreiller? Do you find them:

   a._______puzzling?

   b._______scary?

   c._______intriguing?

   d._______funny?

PART III - GENERAL ITEMS (cont'd.)

8. Do you think that learning French will be useful to you?

a._______Yes, definitely.

b._______Somewhat useful.

c._______Not very useful.

9. What French words do you know that are used currently in the English language?

____

____

10. Where is French spoken outside of France?

____

____

APPENDIX F

COURSE QUESTIONNAIRE

APPENDIX F

MASTER PROGRAM

COURSE QUESTIONNAIRE

The purpose of this questionnaire is to obtain your opinions concerning the effectiveness of the MASTER Program.

The information that you provide will be of assistance to the undersigned in his evaluation of present and future classes, and will help him to determine what changes current instructions may require to make them more responsive to participants.

Please answer each question as honestly as you can. The results of this survey will be made available to you. Thank you!

NAME:____
(Last) (First) (MI)

1. Before you actually began the MASTER Program, what was your expectation about how much you would learn from it?

   a._______I expected to learn a great deal.

   b._______I expected to learn a fair amount.

   c._______I expected to learn very little.

2. Now that you have finished the course, what do you think about the amount that you learned?

   a._______I learned far more than I thought I would.

   b._______I learned somewhat more than I thought I would.

   c._______I learned about as much as I thought I would.

   d._______I learned somewhat less than I thought I would.

   e._______I learned far less than I thought I would.

3. Was the MASTER Program able to hold your interest?

   a._______No, I was always bored.

   b._______No, I was quite frequently bored.

   c._______I was sometimes bored and other times not.

3. d._______I generally found it interesting but difficult to understand.

   e._______I generally found it fairly interesting.

   f._______I almost always found it very interesting.

4. If the MASTER Program were offered again, and a friend of yours was thinking of volunteering for it, would you recomment that he/she do so?

   a._______Yes, definitely.

   b._______I think so.

   c._______I don't know whether I would or not.

   d._______I think not.

   e._______Definitely not.

5. Think back to the day you started the program. Has your confidence in your own ability to learn a foreign language:

   a._______Increased considerably?

   b._______Increased somewhat?

   c._______Remained unchanged?

   d._______Decreased somewhat?

   e._______Decreased considerably?

6. Do you have any desire to take additional foreign language courses (of any kind) in the future?

   a._______I would like to do so very much.

   b._______I'm somewhat interested in doing so.

   c._______Yes, but it is not job connected.

   d._______I'm not sure whether I'd like to or not.

   e._______I'm pretty sure that I don't want any more.

   f._______I know I don't want any more training.

7. In summing up your experience with the MASTER Program, how did you like it?

   a.________I disliked it very much.

   b.________I disliked it somewhat.

   c.________Neutral.

   d.________I liked it somewhat.

   e.________I liked it very much.

8. In connection with the class sessions, there were explanatory notes in handouts or during lectures. What is your opinion about these explanatory notes?

   a.________They were extremely helpful.

   b.________They were somewhat helpful.

   c.________They were interesting but too technical for me.

   d.________They were a waste of time; I liked the tours better.

   e.________I paid little attention to them.

   f.________Other. (Explain below)

   ____

   ____

9. How would you describe your attitude while you are scoring your responses on this questionnaire?

   a.________Very lenient.

   b.________Somewhat lenient.

   c.________Somewhat strict.

   d.________Very strict.

10. Below are listed the principal kinds of methods/mediums used in the Program. Which did you prefer? (Number in order of priority; 1, 2, 3, 4).

    a.________Lecture and Discussion

    b.________Vugraphs or other Audiovisual aids

    c.________Printed Handouts or Briefings

    d.________Tape Recordings

11. Listed below are (again) the principal kinds of methods/ mediums used in the MASTER Program.

a.________Lecture and Discussion

b.________Vugraphs or other Audiovisual Aids

c.________Printed Handouts or Briefings

d.________Tape Recordings

NOTE: In the blank spaces in front of each item in the above list, write an A, B, C, or D to indicate how valuable or useful you considered that kind of approach to be. Use the following code?

A = Extremely valuable

B = Moderately valuable

C = Slightly valuable

D = Of no obvious value

12. While participating in the Program, how often did you review handout material as homework, although there were no written assignments required?

a.________I did so many times.

b.________I did so occasionally.

c.________I almost never did.

d.________I never did.

13. While participating in the Program, how often did you take notes?

a.________Did not take notes.

b.________Many times per class.

c.________A few times per class.

d.________Seldom.

14. Do you think it would be a good idea to change the frequency of classes to:

a.________One day a week?

b.________Every other week?

c.________As convenient?

d.________Twice a week?

15. On a scale of 1 to 5, how would you rate the presentations and/or course material? (Circle as appropriate) (1=low, 5=high)

a. 1 2 3 4 5 French Language Rules

b. 1 2 3 4 5 Tape Presentations (French Basic Course)

c. 1 2 3 4 5 Tape Presentations (Parole et Pensee)

d. 1 2 3 4 5 Tape Presentations (Alm French)

e. 1 2 3 4 5 Basic Sentences (Dialogues)

f. 1 2 3 4 5 Vocabulary Drills/Exercises

g. 1 2 3 4 5 Substitution Drills/Exercises

h. 1 2 3 4 5 Variation Drills/Exercises

i. 1 2 3 4 5 Translation Drills/Exercises

j. 1 2 3 4 5 Response Drills/Exercises

k. 1 2 3 4 5 Simulation Exercises

l. 1 2 3 4 5 Peer Instruction/Interaction

m. 1 2 3 4 5 Classroom Atmosphere

n. 1 2 3 4 5 Classroom Facilities/Equipment

o. 1 2 3 4 5 Teacher Demonstrations/Lectures/Etc.

p. 1 2 3 4 5 FCAT or Other Objective Tests

q. 1 2 3 4 5 Self-Assessment Tests

16. What did you like least of all about the MASTER Program?

17. What did you like most of all about the MASTER Program?

18. What suggestions for improvements to the Program can you make? Think for a moment.

____

____

____

____

____

19. If you were unable to attend all of the class sessions, would you like to sit in on the sessions you missed during the next scheduled offering of the MASTER Program?

a._______Yes

b._______No

20. How many class sessions did you miss? (circle one)

0 1 2 3 4 5 6 7 8 9

21. What particular language area(s) would you like to know more about?

a.____

b.____

c.____

Thank you, again, for your cooperation in completing this survey.

____

H. E. BRANHAM, JR.

APPENDIX G

LANGUAGE PROFICIENCY RATINGS
LEVELS 2, 3, and 4

APPENDIX G

LANGUAGE PROFICIENCY RATINGS

The rating levels described below provide a meaningful method of characterizing language knowledge and skills which, unlike the academic grade that measures achievement in mastering the content of a prescribed course, measure student achievement in decoding (listening and reading) and encoding (speaking and writing) in terms of proficiency based on criterion objectives tailored to the individual student.

Level II - Limited Career Field or Professional Proficiency. Able to satisfy routine social demands and limited work requirements. Can handle with confidence but not with facility most social situations including introductions and casual conversations about current events, as well as work, family and autobiographical information; can handle limited career field or professional requirements, needing help in handling any complications or difficulties; can get the gist of most conversations on non-technical subjects and has a speaking vocabulary sufficient to express things simply with some circumlocutions; accent though quite often faulty, is intelligible; can usually handle elementary constructions quite accurately but does not have thorough or condent control of the grammar. Able to read simple prose, in a form equivalent to typescript or printing, on subjects within a familiar context.

Level III - Minimum Career Field or Professional Proficiency. Able to speak the language with sufficient structural accuracy and vocabulary to participate effectively in most formal and informal conversations on practical, social, and professional topics. Able to read standard newspaper items addressed to the general reader, routine correspondence, reports and technical material in his/her special field.

Level IV - Full Career Field or Professional Proficiency. Able to use the language fluently and accurately on all levels normally pertinent to career or professional needs. Able to read all styles and forms of the language pertinent to professional needs.

APPENDIX H

TYPE A, SELF-ASSESSMENT FORM

APPENDIX H

TYPE A, SELF-ASSESSMENT FORM*

Instruction: Put a cross in the place corresponding to your estimated level in each of the four skills (listening, speaking, reading, and writing).

LISTENING

I understand practically everything that is said to me in French ______ 10
______ 9
______ 8
______ 7
______ 6
______ 5
______ 4
______ 3
______ 2
______ 1
I do not understand spoken French at all ______ 0

SPEAKING

I am completely fluent in French ______ 10
______ 9
______ 8
______ 7
______ 6
______ 5
______ 4
______ 3
______ 2
______ 1
I cannot speak French at all ______ 0

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READING

I understand French text without any difficulty at all ______ 10

______ 9

______ 8

______ 7

______ 6

______ 5

______ 4

______ 3

______ 2

______ 1

I cannot understand French text at all ______ 0

WRITING

I write French without any difficulty at all ______ 10

______ 9

______ 8

______ 7

______ 6

______ 5

______ 4

______ 3

______ 2

______ 1

I cannot write French at all ______ 0

NAME:____
(Last) (First) (MI)

REMARKS:____

____

____

____

____

* Adapted from Oskarsson, 1980.

APPENDIX I

TYPE B, SELF-ASSESSMENT FORM

APPENDIX I

TYPE B, SELF-ASSESSMENT FORM*

Instruction: Put a cross in the place corresponding to your estimated proficiency levels. One cross for each skill, please.

LISTENING

Imagine that you are watching a French movie on television. How much would you understand of what was said without the English sub-titles.

I would understand everything ______ 10
______ 9
______ 8
______ 7
______ 6
______ 5
______ 4
______ 3
______ 2
______ 1
I would understand nothing ______ 0

SPEAKING

Imagine that you meet a French-speaking person who does not know anything about the United States. He wants to have as much information as possible about the States and therefore, asks you questions about living conditions, housing, nature, weather, eating habits, leisure, holidays, sport, radio and television. To what degree would you be able to answer his questions?

I would be able to answer his questions without any difficulties at all ______ 10

______ 9

______ 8

______ 7

______ 6

______ 5

______ 4

______ 3

______ 2

______ 1

I would not be able to say anything ______ 0

READING

Imagine that someone with no knowledge of French comes to you with a French newspaper, e.g., *Le Monde*, *Le Figaro*, and asks you to give as detailed an account as possible of what is on the front page. You have plenty of time, but must not use a dictionary. How well would you manage the task?

I would be able to give a detailed account of everything on the page ______ 10

______ 9

______ 8

______ 7

______ 6

______ 5

______ 4

______ 3

______ 2

______ 1

I would not be able to say anything ______ 0

WRITING

Imagine that you are given the task of writing a detailed account about yourself in French. It would include your life from when you were a child up to the present day (childhood memories, games, school, friends, youth, present occupation, interests, personal qualities, relatives and freidns, future plans, etc.). You have plenty of time, but must not use a dictionary. How well would you manage the task?

I would have no problems in writing a detailed account which was linguistically correct ________ 10

________ 9

________ 8

________ 7

________ 6

________ 5

________ 4

________ 3

________ 2

________ 1

I would not be able to write anything ________ 0

- -

NAME: ____
(Last) (First) (MI)

REMARKS: ____

____

____

____

*Adapted from Oskarsson, 1980.

APPENDIX J

TYPE C, SELF-ASSESSMENT FORM

APPENDIX J

TYPE C, SELF-ASSESSMENT FORM

UNIT NO.: _______, ____

INSTRUCTION: Upon completion of Unit _______, ________________

____

put a cross in the boxes corresponding to your level in each of the four skills (listening, speaking, reading, writing). Only one cross for each skill, please.

	LISTENING	UNIT SCORE
_______	I understood most of what was said in French, even when said by native speakers, but had difficulty in understanding extreme dialect and idioms. It was also difficult for me to understand speech under unfavorable conditions, such as through background noises or poor quality tape recordings.	4
_______		3.5
_______	I could follow and understood the essential points in French when spoken normally and clearly, but did not understand native speakers when they spoke very quickly or used idioms or dialect.	3
_______		2.5
_______	I could follow and understood the essential points concerning everyday and general things when spoken slowly and clearly, but in the course of conversation I often had to replay certain sections of tapes, or had to ask to have a statement or word repeated. Under unfavorable conditions, I only understood occasional words and phrases.	2
_______		1.5
_______	I understood the meaning of simple requests, statements, and questions if they were spoken slowly and clearly and if Ihad a chance to replay the tapes several times. I only understood common words and phrases. Under unfavorable conditions, I understood hardly anything.	1

		UNIT SCORE
________		0.5
________	I did not understand the language at all.	0

SPEAKING

________	I spoke the language fluently and for the most part correctly. I was familiar with the vocabulary and "rules" of the unit so I seldom had to hesitate or search for words. On the other hand, I was not completely fluent in situations in which I had had no practice with the language.	4
________		3.5
________	I could make myself understood, but my language was not without mistakes and sometimes I could not find the words for what I wanted to say. It was difficult for me to express myself in situations in which I had no opprotunity to practice the language. I could give a short summary of general information in French that I had received in English.	3
________		2.5
________	I could make myself understood in the simple phrases from the unit. My vocabulary was somewhat limited, so it was only with a great deal of effort that I could use the language in simulated or real-life situations.	2
________		1.5
________	I could express only very simple things concerning the contents of the unit. I only had a command of very simple words and phrases.	1
________		0.5
________	I did not speak the language at all.	0

READING

		UNIT SCORE
________	I understood everything or nearly everything written in the language within the contents of the unit. There were words that I did not understand in the difficult passages.	4
________		3.5
________	I understood most of what I read in the unit dealing with familiar subjects, but not all the details.	3
________		2.5
________	I understood the meaning of simple written material, and also understood the essential things in simple examples dealing with only familiar subjects.	2
________		1.5
________	I understood only the main points of simple examples and simple written information about familiar things.	1
________		0.5
________	I could not read the language at all.	0

WRITING

		UNIT SCORE
________	I wrote the language somewhat easily and for the most part correctly. I only made occasional grammatical mistakes and spelling mistakes. When taking dictation about subjects in which I had no opportunity to practice the language, I needed to use a dictionary.	4
________		3.5

WRITING (cont'd.)

		UNIT SCORE
________	I could formulate written messages or give a coherent account of things connected with the unit, but I made mistakes in both grammar and spelling. When taking dictation, I often could not find the words for what I wanted to express, and also made mistakes due to a lack of words.	3
________		2.5
________	I could formulate simple written messages concerned with the contents of the unit, but there were often grammatical and spelling mistakes and a wrong choice of words. I could write down only simple text from dictation, and there were often spelling mistakes and mistakes due to a lack of words.	2
________		1.5
________	I could formulate very simple messages connected with the unit. When taking dictation, I only had a command of very simple words and phrases.	1
________		0.5
________	I could not write the language at all.	0

END OF SELF-ASSESSMENT TEST, UNIT NO.__________

NAME:____
(Last) (First) (MI)

REMARKS:

____

____

____

____

APPENDIX K

TYPE D, SELF-ASSESSMENT FORM

APPENDIX K

TYPE D, SELF-ASSESSMENT FORM

Instruction: Imagine that you meet a French-speaking person from another country. He does not know anything about you and your country. Indicate your estimated command of the language according to the scale below and mark your response on the answer sheet provided.

4	3	2	1
Yes	To a great extent	To some extent	No

1. I can tell him when and where I was born.
2. I can spell my name in French.
3. I can describe my home to him.
4. I can tell him what kinds of food and drink I like and don't like.
5. I can tell him about my interests (hobbies, interest in general, etc.).
6. I can tell him what I usually read (kinds of books, newspapers, magazines, textbooks, etc.).
7. I can ask him what newspapers there are in his own country.
8. I can tell him what I do in my free time.
9. I can ask him how to get to a certain place by public transport.
10. I can tell him what I think of art galleries.
11. I can ask him about the price of a ticket for a certain football game.
12. I can tell him about things that might interest a tourist in Florida.
13. I can ask him questions about traffic-rules in Frence.
14. I can say something about social security in my country (old age pensions, medicare, etc.).

15. I can tell him what sort of government we have in my country.

16. I can say something about my political view and tell him whether I support a political party.

17. I can tell him how I feel at the moment (if I am hungry, tired, ill, etc.(.

18. I can ask him to help me arrange an appointment with a doctor.

19. I can tell him that I take medicine regularly.

20. I can tell him that I am tired and need some rest.

21. I can ask him to repeat slowly what he just said.

22. I can ask him about the pronunciation of a certain word.

23. I can ask him to characterize the climate in his country.

24. I can ask him if he knows the approximate price of a certain piece of clothing in his own country.

25. I can inform him about where he can have his car serviced.

26. I can ask him to telephone me some time.

27. I can ask for his telephone number and give my own number.

28. I can tell him where he can change foreign money.

29. I can describe weather conditions in the four seasons in my own country.

30. I can tell him where he can eat and drink.

NAME: ____
(Last) (First) (MI)

REMARKS: ____

____

____

____

*Adapted from Oskarsson, 1980.

ADMIN. NO

RESPONSE SHEET

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USE ONLY A NO. 2 PENCIL. MAKE BROAD, DARK MARKS THAT COMPLETELY FILL THE AREA BETWEEN THE PAIRS OF LINES. DO NOT MARK BEYOND THE END OF THE LINES. COMPLETELY ERASE ANY MARKS YOU WISH TO DELETE.

STUDENT NUMBER	0	1	2	3	4	5	6	7	8	9
	0	1	2	3	4	5	6	7	8	9
	0	1	2	3	4	5	6	7	8	9
	0	1	2	3	4	5	6	7	8	9
	0	1	2	3	4	5	6	7	8	9
SECTION	0	1	2	3	4	5	6	7	8	9
	0	1	2	3	4	5	6	7	8	9
CLASS	0	1	2	3	4	5	6	7	8	9
	0	1	2	3	4	5	6	7	8	9
	0	1	2	3	4	5	6	7	8	9
SEQ ENG	0	1	2	3	4	5	6	7	8	9
INST CODE		AJ	BKB	CLT	DMU	ENV	FOW	GPX	HQY	IRZ

	TRUE A	FALSE B	C	D	E	F	G	H	I
1	1	2	3	4	5	6	7	8	9
2	1	2	3	4	5	6	7	8	9
3	1	2	3	4	5	6	7	8	9
4	1	2	3	4	5	6	7	8	9
5	1	2	3	4	5	6	7	8	9
6	1	2	3	4	5	6	7	8	9
7	1	2	3	4	5	6	7	8	9
8	1	2	3	4	5	6	7	8	9
9	1	2	3	4	5	6	7	8	9
10	1	2	3	4	5	6	7	8	9
11	1	2	3	4	5	6	7	8	9
12	1	2	3	4	5	6	7	8	9
13	1	2	3	4	5	6	7	8	9
14	1	2	3	4	5	6	7	8	9
15	1	2	3	4	5	6	7	8	9
16	1	2	3	4	5	6	7	8	9
17	1	2	3	4	5	6	7	8	9
18	1	2	3	4	5	6	7	8	9
19	1	2	3	4	5	6	7	8	9
20	1	2	3	4	5	6	7	8	9
21	1	2	3	4	5	6	7	8	9
22	1	2	3	4	5	6	7	8	9
23	1	2	3	4	5	6	7	8	9
24	1	2	3	4	5	6	7	8	9
25	1	2	3	4	5	6	7	8	9
26	1	2	3	4	5	6	7	8	9
27	1	2	3	4	5	6	7	8	9
28	1	2	3	4	5	6	7	8	9
29	1	2	3	4	5	6	7	8	9
30	1	2	3	4	5	6	7	8	9
31	1	2	3	4	5	6	7	8	9
32	1	2	3	4	5	6	7	8	9
33	1	2	3	4	5	6	7	8	9
34	1	2	3	4	5	6	7	8	9

	TRUE A	FALSE B	C	D	E	F	G	H	I
35.	1	2	3	4	5	6	7	8	9
36.	1	2	3	4	5	6	7	8	9
37.	1	2	3	4	5	6	7	8	9
38.	1	2	3	4	5	6	7	8	9
39.	1	2	3	4	5	6	7	8	9
40.	1	2	3	4	5	6	7	8	9
41.	1	2	3	4	5	6	7	8	9
42.	1	2	3	4	5	6	7	8	9
43.	1	2	3	4	5	6	7	8	9
44.	1	2	3	4	5	6	7	8	9
45.	1	2	3	4	5	6	7	8	9
46.	1	2	3	4	5	6	7	8	9
47.	1	2	3	4	5	6	7	8	9
48.	1	2	3	4	5	6	7	8	9
49.	1	2	3	4	5	6	7	8	9
50.	1	2	3	4	5	6	7	8	9
51.	1	2	3	4	5	6	7	8	9
52.	1	2	3	4	5	6	7	8	9
53.	1	2	3	4	5	6	7	8	9
54.	1	2	3	4	5	6	7	8	9
55.	1	2	3	4	5	6	7	8	9
56.	1	2	3	4	5	6	7	8	9
57.	1	2	3	4	5	6	7	8	9
58.	1	2	3	4	5	6	7	8	9
59.	1	2	3	4	5	6	7	8	9
60.	1	2	3	4	5	6	7	8	9
61.	1	2	3	4	5	6	7	8	9
62.	1	2	3	4	5	6	7	8	9
63.	1	2	3	4	5	6	7	8	9
64.	1	2	3	4	5	6	7	8	9
65.	1	2	3	4	5	6	7	8	9
66.	1	2	3	4	5	6	7	8	9
67.	1	2	3	4	5	6	7	8	9
68.	1	2	3	4	5	6	7	8	9

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APPENDIX L

COURSE SYLLABUS
INTENSIVE CONVERSATIONAL FRENCH

COURSE SYLLABUS

Intensive Conversational French

Course Texts (As Required)

ALM French, Level One. Second Edition. New York: Harcourt Brace & Jovanovich, Inc., 1970.

Cossard, M. and Salazar, R. French Basic Course. Foreign Service Institute, Department of State. Washington, D.C.: Superintendent of Documents, Government Printing Office, 1978.

Lenard, Y. Parole et Pensee: Introduction au Francais d'Aujourd'hui. Troisieme Edition. New York: Harper & Row, Publishers, 1977.

Pucciani, O. F. and Hamel, J. Langue et Langage: Le Francais par le Francais. New York: Holt, Rinehart and Winston, 1967.

Course Description

This is an intensive French course which is designed to help students acquire language skills to meet general social demands and to further develop competency to handle work-related requirements within academic, business, professional, or career fields. The use of language labs, independent study, and native speakers, places primary emphasis on conversation, i.e., listening and speaking. This course does not replace, but may serve as a supplement for basic French language courses.

Course Objectives

The individual learner is the key ingredient of this program. It is on the learner that all energies are focused, since it is with the learner that the responsibilities of learning the French language ultimately rest.

1. Class Prpearation. Each learner is expected to prepare adequately for each class. This involves doing lesson plans, preparing classroom exercises, etc.

2. Follow-Up. Each learner is expected to follow-up each classroom session with homework (exercises, tape listening, readings).

COURSE SYLLABUS: Intensive Coversational French (Cont'd)

3. Notebook. Each learner is expected to maintain a three-ringed, loose-leaf notebook containing the following items:

   a. MAS Form No. 1
   b. Exercises and Assignments
   c. Lesson Plans
   d. Vocabulary (relative to academic, business, professional, or career field
   e. French "Rules"
   f. Communicative Ability Tests
   g. Self-Assessment Tests

4. Self-Assessment. Each class should carry out some form of self-assessment. A short quiz drawn on one of the several types of exam formats should be given periodically and reviewed by the instructor.

5. Communicative Ability Testing. The learner submits this exam to the language coordinator who will record the grade and provide diagnostic evaluation (strengths and weaknesses) and suggest remedial work when necessary.

6. Cassette Tape Recorder. Many of the tapes used in the program will be recorded in class by the learner with the help of laboratory assistants. Other tapes used in class or at home will be available to the learner off-the-shelf, in cassette form. Experience has shown the cassette recorder to be as efficient as the language laboratory and a good deal more convenient and therefore more cpnsistently used.

Organization of Study Activities

For an intensive conversational language course to be effecient and effective, all scheduled class meetings must be attended per week and a minimum of four study hours at home must be devoted for every hour of class time. Classroom and home study activities must be accurately recorded on the MAS Form No. 1, and each week should include structural French rules and drills, including contextual dialogs and basic sentences.

APPENDIX M

GLOSSARY

GLOSSARY

Ability Grouping	Arrangement whereby students are assigned to groups on the basis of aptitude testing.
Absolute Standards	A statement defining the exact level of performance required of a student as a demonstration that he has mastered the course objective(s). Criterion-referenced tests are usually based on an absolute standard.
Achievement Grouping	Arrangement whereby students are assigned to groups according to their performance on pretests of units of the course.
Achievement Test	A test for measuring an individual's progress in the mastery of subject to be learned.
Action	Occurs in terminal learning objectives and learning objectives; describes the specific behavior the learner is to exhibit after training.
Action Verbs	Verbs that convey action and reflect the type of learning that is to occur. Action verbs must reflect behaviors that are measureable, observable, verifiable, and reliable.
Activity Step	One simple operation or movement that comprises part of a job. A job performance standard consists of a list of these operations or movements.
Adaptive Technique	Any of several techniques used in programming to accommodate individual differences. It may permit the student to bypass material he already knows or may provide additional instruction as needed. In programming language, this also means bypassing or branching.
Adjunct Programming	A programming method in which the instructional program supplements a textbook, technical publication, or other

source of information. The program is intended to instruct the student in the use of the material it supplements or to expand upon the content of that material.

Adjustment	Refers to adjustment (tryout and revision) of the system. Process whereby the system is changed to improve its output and/or to make it more efficient and economical.
Administrative Criteria	In media selection, the options that courseware be developed locally or at some central location.
Advance Organizer	An introductory statement that describes the general concepts and materials to be covered during instruction. This provides the student with a list of the objectives which describe what he or she will be able to do at the end of instruction.
Aggregate	The process of gathering together distinct but similar elements into a commonly designated higher order cluster.
Algorithm	An orderly procedure or exact prescription for solving a problem. In an algorithm, the physical layout of the presentation shows the relationship between input data, rules, and outcomes. Algorithms replace continuous prose as an instrument for communicating complex rules and designs.
Alphanumeric	Refers to a combination of letters and numbers; for example, on the keyboard of a teletype.
Alternate Path	Refers to elements which have relationships in which the specific situation encountered determines the appropriate sequence, or it may be another way of meeting the same objective.
Analysis of Learning Task	Process by which the designer of an instructional system identifies whatever the student has to learn in order to be able to perform the task as described in the criterion objective.

Audio-Visual Media	Those things which communicate information through human sight or sound sensors; for example, 16mm motion picture films, tape recordings, charts, maps, objects and like items.
Award	A certificate, diploma, or degree conferred upon a student by an educational institution upon successful completion of an instructional program.
Baseline Data	Valid and reliable information about the current level of performance of the intended student population. This data can be used to confirm the need to develop new instruction, or can be used as a comparison in ascertaining differences between students' performance before and after instruction.
Behavior	Any activity, overt or covert, capable of being measured.
Behavioral Attributes	Qualities or activities that characterize an object or process. Behavioral attributes characterize each category of learning.
Behavioral Objective	A statement that specifies precisely what behavior is to be exhibited, the conditions under which behavior will be accomplished, and the minimum standard of acceptable performance.
Block Scheduling	Mode of instruction whereby all students receive the same instruction at the same time.
Branching	In programmed instruction, a point of choice at which students are sent to alternative items depending on their responses to the particular item.
Bypassing	In programmed instruction, a technique which permits a student to skip certain portions of the materials because of prior knowledge. A criterion item may be inserted in a linear program and, if the student passes it, he is sent forward several items (bypassing); if he fails the criterion item, he takes an intervening sequence of review or remedial items.

Career Education	A concept which includes the development of faculty expertise in and commitment to work-education interactions; curriculum development to reflect career interests and needs; involvement of the business-labor-industry-governmental communities in the learning process; and opportunities for the integration of the worlds of learning and work.
Chaining	The linking together of a series of discriminable responses in a particular order. The completion of each response provides the stimulus for the next response. May involve chains of verbal responses or chains of motor responses.
Coding Structure	The format and procedures for identifying items by a means of numeric, alphabetic, or alphanumeric symbols in a logical and sequential manner.
Comparability	The characteristic of commonality among or between selected elements measured in terms of identical constants. The accuracy of the measurement of the degree of comparability is usually dependent on the number of constants applied.
Compatibility	The condition that requires two or more elements to be technically related. They must be defined the same, be capable of being measured the same, and be aggregated and summarized the same.
Components	Parts which comprise a system and which are selected to accomplish specific functions required for the attainment of the objectives of the system. In education, we have human components such as the learner, teacher, counselor; media, such as print and audio-visual equipment; facilities, such as classroom and other material and financial means.
Component Analysis	A process employed by the designer of a system in order to identify alternative human and material means that have the potential to carry out specific functions required for the attainment of system objectives.

Confirmation	Notification to the student of the correctness of his response immediately after his response. (See also feedback.)
Constraints	Limiting or restraining conditions or factors, such as policy considerations, time limitations, environmental factors, and budgetary and other resource limitations.
Constructed Response	An answer requiring recall or completion as opposed to recognition, e.g., writing a sentence, paragraph, or essay.
Course	An organization of subject matter and related learning experiences provided for the instruction of students on a regular or systematic basis, usually for a predetermined period of time as in a semester, a quarter, or a regular school term.
Course Control Documents	Specialized publications used to control the quality of instruction. Specialty training standard, course training standard plan of instruction, syllabus, and course charts are considered course control documents.
Course Documentation	Information describing the current content of a course (instructional materials, tests, instructor's manual, evaluation plan, student's manual) and its developmental history (job analysis, criteria for selection tasks for training, previous revisions).
Courseware	The technical data, textual materials, and audiotapes, slides, movies, and other audiovisual instructional materials.
Clustering	A process of organizing many tasks into groups for the purpose of deciding upon the optimal instructional setting mix for that group of tasks.
Criterion Objective	This objective specifies precisely what behavior is to be exhibited, the conditions under which behavior will be accomplished to accurately satisfy a performance requirement.

Criterion-Referenced Test	Measures what an individual can do or knows, compared to what he must be able to do or must know in order to successfully perform a task. Here an individual's performance is compared to external criteria or performance standards which are derived from an analysis of what is required to do a particular task.
Critical Cue	Cue which must be correctly interpreted by the student before we can correctly perform the associated task
Critical Sequence	Sequencing of topics or objectives according to their importance.
Cue	A stimulus added to the terminal stimulus to make the correct response more likely while the student is learning. It may be pictorial or verbal.
Cut-Off Score	Minimum passing score.
Data	Collection of facts or numerical values resulting from observations of situations, objects, or people.
Data Collection Plan	An outline of the procedures and techniques that will be used to gather information for any specific purpose.
Data Recording Plan	Method of tabulating background responses and test data.
Decay Rate	The amount of time it takes a trainee to forget what he has learned in school. If the decay rate is high then a trainee should not receive instruction in a specific task until shortly before he will actually perform it.
Decision Tree	Flowchart; graphic representation of the sequence of a specific activity or operation.
Delivery System	Any method containing plans and procedures for the presentation of instruction. Platform instruction, television, and instructional systems are all delivery systems.

Dependent Relationship	Occurs when skills and knowledges in one learning objective are closely related to those in the other learning objective. In order to master one of the learning objectives, it is first necessary to learn the other.
Disaggregate	The process of dispersing a cluster of elements into distinct but similar elements of a lower order than the original group.
Discrimination	Making different responses to the different stimuli. A discrimination requires a person to determine the differences among inputs and to respond differently to each.
Distributed Practice	During learning, the process of spacing numerous, relatively short, practice sessions throughout the learning period.
Downtime	Refers to the period of time when equipment is inoperable.
Duty	One of the major subdivisions of work performed by one individual. One or more duties constitute a job.
Duty Title	Categorizes groups of tasks under identifiable headings to help in the organizing of lists of tasks.
Educational Institution	A public, private, or proprietary organization or establishment devoted to the promotion, development, and attainment of learning at one or more levels of instruction, and embracing such designations as school, college, institute, or university.
Empirically Based Revision	Revision based on the results of test data and the collection of other types of quantitative information.
Enrichment	Supplementary material which aids the student in progressing through the course but is not considered crucial to learning.

Entering Behavior	The skills and knowledges a trainee has when he or she enters a course of instruction. Includes information about school performance, school completion, type of schooling received, instruction patterns, and test scores. Sometimes includes other information which may be relevant to development plans such as social-economic status, ethnic-racial background, socio-topical indexes, and physical-psychological deviations.
Entry Skills	Specific, measurable behaviors that have been determined through the process of analysis of learning requirements to be basic to subsequent knowledge or skill in the course.
Entry Skills Test	A measurement instrument designed to determine if a student already possesses certain skills or knowledge needed as a prerequisite before undertaking new instruction.
Entry Test	Contains items based on the objectives that the intended students must have mastered in order to begin the course.
Environment (System)	The larger context in which a system operates, from which it receives its purpose and resources, and to which it is responsible for the adequacy of its output.
Error of Halo	Occurs when an observer sometimes allows his rating of performance to be influenced by his general impression of a person.
Errors of Logic	Occur when two or more traits are being rated. It is present if an observer tends to give similar ratings to traits which do not necessarily go together. The traits are related only in the mind of the person making the error.
Errors of Standard	Occur when observers tend to rate performers too high or too low because of differences in their standards.

Evaluation	Procedure to determine the effectiveness of an instructional product or process to ascertain specific causes for the effectiveness or lack of it, and to make decisions appropriate to the extent of the effectiveness.
Evaluation of Criteria	The measures used to determine the adequacy of performance.
Evaluation Plan	A method or outline of what set of procedures will be used to gather data and information for the purpose of assessing a course of instruction.
Experiential Education	In this study, "experiential education" means learning activities outside the classroom, with learning objectives planned and articulated in advance. Specialized types of experiential education include: internships, cooperative education, educational practica, field experience, field study, preceptorships, clinical experiences, student teaching, work-learning, and work-study.
External Cues	Signals for action that exist outside of the student (conditions, features, or characteristics of the job environment that trigger action).
Fading	In programmed instruction, the progressive diminishing of cues within a teaching sequence so that all prompting is absent.
False Negative	Occurs when a person can perform the task but receives a failing score on the test.
False Positive	Occurs when a person cannot perform the task but receives a passing score on the test.
Feedback	The return of information. Information on student performance is "fed" back to the student so that he can improve that performance; to the instructional designer so that he can improve materials and procedures on the basis of student needs; to the management system so it can monitor the internal and external integrity of the instruction and make

	appropriate revisions. Or, refers to the flow of data or information from one step in the Instructional System Development Model to others.
Fidelity	Refers to how well the actions, conditions, cues, and course standards approximate those of the task.
Field User Needs	The general and specific duties that will have to be taught to the trainee if he is to be able to adequately perform in a real world environment.
First Draft Materials	Any materials (book, film, etc.) which are not yet committed to their final form. First draft refers to the fact that the materials are still in 'rough' form and will be revised on the basis of test results and other data.
Fixed Sequence	Refers to elements that are always done in the same order.
Flowchart	A graphic representation of the sequence of a specific activity or operation; decision tree.
Follow-Up Activities	The work events that occur after a course of instruction has been completed.
Formative Evaluation	The iterative process of developing and improving instructional materials and procedures.
Functions	Specific activities that need to be carried out in designing, developing, and maintaining a system in order to facilitate the attainment of the objectives of the system.
Generalization	Learning to respond to a new stimulus that is similar, but not identical, to one that was present during original learning.
Genetic (Genesis)	The term which characterizes the emergence of subject-matter elements from a single origin and the establishment of that origin as a distinct subject-matter area.

No-Go	Pass-fail; criterion of evaluation whereby student cannot be "partially correct." He is either 100% correct (go) or incorrect (no-go).
Graphic Artist	Designs and prepares a wide variety of visual illustrations such as graphs, charts, and diagrams.
Graphic Scale	Measurement device which includes some type of number line on which students indicate their attitude toward a social object.
Group Management Plan	Arrangement whereby instruction is scheduled and conducted for groups instead of individuals.
Group-Pacing	A procedure in which students progress together toward the same objectives; often employed where self-pacing is not practical for administrative reasons.
Group Training	A group of people gathered together for the purpose of receiving information or instruction in the performance of some specific task.
Hard Data	A direct and precise measure of a specific performance. A Job Performance Measure is an example of hard data while an attitude questionnaire is a less direct measure, providing soft data.
Hierarchy	Any system of related elements arranged in rank order of prominence, of sequence or generic development, or other characteristic which allows aggregation of lower elements into higher order clusters.
High Density Signal	A signal containing many cues. A low density signal contains few cues.
Independent Relationship	Occurs when skills and knowledges in one objective are unrelated to those in the other objective. Mastering one of the objectives does not simplify the other.
Independent Study	A course of study or program fitted to the individual learner's background, abilities, and training needs, in which

	the learner selects his own materials and proceeds at his own pace. Sometimes referred to as a behavior to be learned.
Indicator Behavior	Refers to that behavior that indicates the presence of a specific attitude.
Individualized Instruction	Refers, in the Instructional System Development Model, to a management scheme which permits individual characteristics of trainees to be a major determinant of the kind and amount of instruction given. Here, it nearly always implies some form of self-pacing.
Information	Knowledge; the facts, names, labels, and larger bodies of knowledge that are necessary for successful job performance.
Installation Support Schools	Organized and operated by individual units or commands to meet local training requirements.
Instructional Conditions	The amount of participation which the instruction requires of the learner. Instructional conditions may be active (the learner produces or practices) or passive (the learner sits and listens).
Instructional Designer	Person who designs and develops a program or course of studies based on a systematic analysis.
Instructional Management Plan	The specifications for the scheduling, instruction and evaluation of trainees toward the goal of course completion.
Instructional Program	A plan of one or more courses or combination of courses and procedures designed to accomplish a predetermined objective or set of allied objectives, such as preparation for advanced study, qualification for an occupation or range of occupations, or solely to increase knowledge or understanding.
Instructional Setting	The vehicle through which a trainee who initially is not able to perform a task becomes proficient in performing the task; for example, performance aids, self-teaching exportable packages, formal on-job training, installation support schools, and resident schools.

Instructional Support	Learning resources; different kinds of material, number of instructors, amount of time, etc. which will contribute to the learning situation.
Instructional System	The total effort, distinct from the operating system by location, authority, or mission, that is concerned with the preparation of individuals to serve the operating system.
Interlay	A structure of subject-matter elements at one order which when combined with a structure of a higher or lower order, allows for greater diversity of subject-matter data identification.
Internal Cues	Internal biological signals that initiate or guide behavior.
Internal Evaluation	Assessment of the effectiveness of an instructional program in terms of student performance on stated terminal learning objectives.
Job	The duties and tasks performed by a single worker constitute his job. If identical duties and tasks are performed by several individuals, they all hold the same job. The job is the basic unit used in carrying out the personnel actions of selection, training, classification, and assignment.
Job Analysis	The basic method used to obtain a detailed listings of duties, tasks, and elements necessary to perform a clearly defined, specific job, involving observations of workers and conversations with those who know the job, in order to describe in detail the work involved, including conditions and standards.
Job Fidelity	The degree to which a testing situation truthfully and accurately reflects the job's situation.
Job Performance Aid	A checklist, instruction sheet, or other device that offers a possible alternative to training rather than an actual method of training; they are developed to eliminate or minimize training requirements for some tasks.

Job Performance Measures	Tests that are used to evaluate proficiency of a job holder on each task he performs.
Job Performance Test	Test used to determine whether or how well an individual can perform a job. It may include either all of the job performance measures for a particular job or a subset of the job performance measures.
Knowledge of Results	Feedback; information provided to the student indicating the correctness of his response. Evaluative knowledge of results indicates what a student is doing right and what he is doing wrong. Comparative knowledge of results indicates how the student's response compares to the objective or standard established by the instructor.
Learning	A change in the behavior of the learner as a result of experience. The behavior can be physical and overt, or it can be intellectual or attitudinal.
Learning Activity	The specific behaviors a student performs during a particular episode of learning.
Learning Analysis	A procedure to identify subelements that must be learned before a person can achieve mastery of the performance.
Learning Category	A division of learning behavior. All learning may be classified into one of four learning categories: mental skill, physical skill, information, or attitude.
Learner-Centered	An instructional process in which the content is determined by the learner's needs, the instructional materials are geared to the learners' abilities, and the instructional design makes the learner an active participant.
Learner Characteristics	The traits possessed by learners that could affect their ability to learn (e.g., age, I.Q., reading level, etc.)
Learning Event	The immediate outcome of a learning activity.

Learning Guidelines	Statements which specify the learning events and activities appropriate to specific instruction. Learning guidelines combine to form learning subcategories.
Learning Hierarchy	Graphically portrays the relationship among learning tasks in which some tasks must be mastered before others can be learned.
Learning Objective	Describes precisely what is to be learned in terms of the expected student performance under specified conditions to accepted standards. These learning objectives identify the mental skills, information, attitudes, or physical skills that are required to perform the terminal learning objective.
Learning Resource Center	Library containing instructional materials and areas for viewing and study.
Learning Step	Occurs when learning objectives are broken down into smaller parts.
Learning Sub-Category	A division of a learning category.
Learning Tasks	Specific knowledge, skills, and attitudes which the student must master to fulfill the objective.
Learning Task Analysis	Procedure used in the domain of intellectual skills to identify prerequisite tasks that must be learned before a person can learn a given task.
Level of Subject-Matter Instruction	An indication of the general nature and difficulty of instruction, usually identified by the designation of a grade or year in an organized educational system.
Limitations	Restrictions imposed upon the design, development, and management of a system by its environment. (See also constraints.)
Management Plan	Program for the assignment, monitoring, and assessment of the personnel, materials, and resources dedicated to a specific mission, operation, or function.

Mastery	In terms of learning, refers to meeting all of the specified minimum requirements for a specific performance. Criteria for mastery are defined in the design phase of the Instructional System Development Model.
Mean	Arithmetic average calculated by adding up all scores and dividing by the number of scores.
Measurement	Consists of rules for assigning numbers to objects to represent quantities of attributes.
Measurement Errors	Incorrect procedures carried out during the measurement process which invalidate the results. These errors result from unfounded assumptions made by judges or raters.
Measurement Process	The operations involved in determining the amount of an attribute (e.g., skill, knowledge, or attitude) possessed by a student.
Media	Means for presenting instructional material to learners; for example, books, audiotapes, and filmstrips.
Media Alternative	A form of instructional material that contains the stimulus criteria required by a specific learning activity.
Media Mix	Combination of different media used to present a unit of instruction.
Media Pool	All of the media options suitable for a given unit of instruction. The final media choice is drawn from the media pool.
Media Selection	Is the major means of determining how instruction is to be packaged and presented to the student.
Mental Set	A preparatory mental adjustment, or readiness, for a particular type of experience.

Order	A term which identifies the vertical position of an element in a hierarchial array.
Organizational Unit	A school, institution, or establishment that exercises control over the provision of courses or other curriculum subject matter.
Peer Training	A method of instruction in which a student who has completed training acts as an instructor to another student in the skill or knowledge to be learned. This procedure continues with each trainee becoming an instructor for the next trainee.
Performance	Executing an act to completion; actual accomplishment of a task to some preset standard of completeness and accuracy.
Performance Evaluation	The gathering of data to specifically determine the success of students on a specific task, as a result of a training program.
Performance Measures	The absolute standard by which a job performance is judged. A performance measure is the inventory of job tasks with each performance objective.
Perse Erate	Continue an activity until it is completed, regardless of the difficulty, or the appropriateness of the solution technique to the problem.
PERT -- Program Evaluation Review Technique	PERT is a method of minotoring the flow of a large project by breaking it down into small individual activities and assigning each activity a specified amount of time for completion.
Physical Skills	Specified muscular activities for accomplishing a goal.
Post Feedback Delay	The pause which follows the presentation of feedback. This allows time for the correct response to "sink in."
Posttest	A test administered after the completion of instruction to assess whether a student has mastered the objectives of the course or unit.

Predictive Validity	The ability of a test score to accurately forecast future performance.
Predifferentiation of Stimuli	Pointing out the distinguishing features of an object and explaining the differences between them.
Pretest	Administered prior to instruction to determine how much the student already knows.
Process	The ongoing state of a designed entity manifested in doing whatever has to be done to attain the purpose of the system.
Process Evaluation	An early stage in ISD development that identifies which steps in the model will be used for the course under development. The purpose of the process evaluation is to describe and docuement the actual developmental process for this particular instruction.
Process Standards	Refers to the conditions which must be satisfied for a job to be successfully completed. Process standards refer to sequence, accuracy, speed of performance, and completeness.
Programmed Instruction	A learner-centered method of instruction which presents the information in planned steps or increments, with the appropriate response immediately following each step. The student is guided step-by-step to the successful completion of the assigned task or training exercise.
Programmed Text	A book in which a program is usually printed in one of three typical formats: page-to-page, down-the-page, or scrambled. In the first type, the student turns the page after each frame or item, finding the answer and the next item on the next page. A down-the-page format requires the student to mask the answer column and in some cases everything but the item he or she is working on as the page is read from top to bottom.
Prompt	A word or other signal that initiates or guides behavior; a cue.

Psycholinguistics	The study of linguistic behavior as conditioning and conditioned by psychological factors including the speaker's and hearer's culturally determined categories of expression and comprehension.
Quality Control	Process of measuring and evaluating in order to maintain course standards through adjustments in instructional materials or procedures.
Quality Control Data	Information which reflects the degree of success achieved by a system or operation.
Random Selection	Choosing people or objects at random rather than according to some systematic plan.
Rank Order	The assignment of ranks to students. This could refer to groups, such as the top 10%, or simply listing each student from highest to lowest. Rank ordering is appropriate when there is a need to select the fastest, the most accurate, or the best producer.
Rating Errors	Errors of standards, ratio, and logic.
Rating Scale	A measurement device in which a student must choose a response from a range of choices arranged in a continuum from low to high or good to bad, etc.
Regulations	Rules for appropriate conduct and behavior.
Reliability	The consistency with which a test measures the amount of student achievement.
Response	Any activity which is induced by a stimulus. In instruction, it designates a wide variety of behaviors which may involve a single word, selection among alternatives, the solution of a complex problem, the manipulation of speech mechanisms to produce certain sounds, and so forth.
Response Bias	Tendency to favor a certain response over others.

Response, Covert	An internalized response which the student presumably makes but which is neither recorded nor otherwise available to an observer (for example, a student "thinks" a response).
Response, Overt	A student's oral, written, or manipulative act which is, or can be, recorded by an observer.
Revision Plan	A detailed outline of the procedures to be taken to modify the structure or content of a course.
Reward Sequence	Scheduling the more pleasant activity to follow the less pleasant activity; can be used to provide a reward for completion.
Sample	A portion or small segment of the students for whom instruction is designed.
Sampling Plan	Procedure for selecting a small but representative group from a larger population.
Scale	In media selection, some materials must represent actual objects and accurately represent the dimensions of those objects. A model may, for example, be full scale, half scale, or on a 1 to 10 scale with the actual object.
Self-Pacing	A procedure in which students can progress through an instructional program at their own rate. This procedure enables slower students to take as much time as they need. Faster students can finish a course or segment of instruction more quickly and thus have more time for other tasks. (See also group-pacing.)
Self-Paced Management Plan	Arrangement whereby instruction is scheduled and conducted for individual students rather than groups of students.
Self-Teaching Exportable Packages	Self instructional study units: generally sent to the student whereever he is stationed.

Sequencing	Ordering instruction; proper sequencing allows the learner to make the transition from one skill or body of knowledge to another, and assures that supporting skills and knowledge are acquired before dependent performances are introduced.
Shaping	Gradually changing a student's behavior until it is correct.
Signal	Cue that initiates and directs activity.
Simulation	A technique whereby low-profile but realistic phenomena are mimicked, permitting cost analysis, potential errors, and compressing or expanding schedule. The simulation may focus on a small subset of the features of the actual real-world situation. Any change from reality or any imitation of reality. Three types are common: simulating part of the system, simulating the operation of the system, and simulating the environment in which the system will operate.
Simulators	Machines or processes designed to provide training which will have high positive transfer to the real world equipment or situation. Simulators are ordinarily cheaper, safer, or more available than the actual situation or equipment.
Skills	Skills involve physical or manipulative activities. They often require knowledge for their execution. All skills are actions having special requirements for speed, accuracy, or coordination. In contrast, knowledges are not directly observable. They involve the use of mental processes which enable a person to use symbols. A person "knows" something when he shows he has used the symbols associated with it.
Slide-Tape	A combination of visual slides and an audio tape synchronized so that the audio describes the content of the slides.
Soft Data	Obtained from attitude or opinion surveys. This data is not as realiable as hard data.

Standards	Occurs in terminal learning objectives or learning objectives; describes the criterion or standard of performance which must be attained.
Stimulus	The event, situation, condition, signal, or cue to which a response must be made.
Stimulus Criteria	Those basic qualities or capabilities of a medium that are required to carry out the intent of the learning activity; for example, visual images, motion, color, and sound.
Storyboard	A collection or series of small pictures which describe the action and content that will be contained in an audio-visual or visual-only production. A sequence of these small pictures comprise a storyboard.
Student	An individual for whom instruction is provided in an educational program under the jurisdiction of an educational institution. The terms student and pupil are often used interchangeably.
Subject-Matter Areas	The most aggregate entries of subject matter which form the basic structure of an array of mutually restrictive categories of knowledge.
Subject-Matter Descriptor	The word or words that are used to identify individual subject-matter elements at any level within a hierarchical array of knowledge.
Subject-Matter Element	A single, discrete unit of subject matter representing a designated component of the substance of knowledge.
Subject Matter Expert	A person who has professional skill in the performance of some job and who is consulted by an instructional designer in the process of job task analysis.
Supportive Relationship	Occurs when skills and knowledges in one objective have some relationship to those in the other objective; the learning involved in mastery of one learning objective transfers to the other, making learning involved in the mastery of the other easier.

Symbol	Anything that stands for or represents something else. A plus sign (+) is a symbol for the mathematical operation of addition.
System (Instructional)	The composite of equipment, skills, techniques (includes all related facilities, equipment, materials, services, and personnel) that is capable of performing and/or supporting an operational role.
Systems Approach	A generic term referring to the orderly process of analysis, design, development, evaluation, revision, and operation of a collection of interrelated elements.
System Master Plan	Control document used to coordinate the development and implementation of an instructional program.
Talk Through Technique	Occurs during the simulation of an operational system; involves talking through each operation in the new system to determine decisions and contingencies.
Target Population	The persons for whom the instructional or training materials are designed. Samples from this population are used in evaluating instructional materials during their development.
Task	A unit of work activity or operation that constitutes a logical and necessary step in a performance. A task usually has a logical beginning and end.
Task Analysis	As used in this text, it includes the process of describing job tasks or learning in terms of performance requirements.
Task Delay Tolerance	A measure of how much delay can be tolerated between the time the need for task performance becomes evident and the time actual performance must begin.
Task Description	Verbal description, in column, outline format which describes the required learning behavior at the highest level of generality. Intended to provide an overview of the total performance.

Task Inventory	List that itemizes all of the tasks that make up a selected duty.
Task Learning Difficulty	Refers to time, effort, and assistance required by a student to achieve performance proficiency.
Task Standard	A statement of how well a task must be performed.
Task Statement	A statement of highly specific action which has a verb and object; for example, sort mail.
Taxonomy	The science which deals with the laws and principles of classification according to natural relationships which can be hierarchical in nature. The term has also been included in the titles of such classifications.
Technology	The study of the practical applications of knowledge which emanate from the theoretical constructs of subject matter.
Terminal Learning Objective	Derived from job performance measures, TLOs are to be attained during training. TLOs are broken down into their component parts which are documented as learning objectives which may be further divided into learning steps. Each TLO contains actions, conditions, and standards.
Testing Constraints	Limitations such as time, money, personnel, facilities, and other resources, which prohibit job performance measures from being identical to the tasks they measure.
Tests	Any device or technique used to measure the performance of a student on a specific task or subject matter.
Trade-Offs	In any systematic approach to instruction, it is necessary to make compromises between what is desirable and what is possible. Ordinarily, these decisions involve increases or decreases in time, money, facilities, equipment, or personnel. Training aids and simulators represent examples of trade-offs.

Trainer Appraisal Kit	A package of instructional materials designed to provide a course instructor with practice in the preparation, presentation, and validation of instruction.
Training	The teaching of job skills. It can take a number of forms such as self-teaching exportable packages, training manuals, individual learning packages, FOJT, or group training.
Training Setting Criteria	In media selection, the options that training must be either small group, large group, individualized at a fixed location, or individualized independent of location.
Transfer of Learning or Training	Ability of the learner to apply old (familiar) concepts to new situations. Transfer of concepts is most effective when the learning situation is so organized as to facilitate generalization and the recognition of relationships.
Tryout	Practice test; the purpose is to make the tryout as realistic as possible by eliminating as many sources of unreliability as possible.
Undertrain	Provide inadequate training that does not prepare a student to meet regular job performance requirements.
Validation	The process of developmental testing, field testing, and revision of instruction to be certain that the instructional intent is achieved. The system is developed unit by unit and tested (or validated) on the basis of the criterion objectives prepared for each unit. Validation allows instructional designers to guarantee specified results.
Validation Documentation	A report which describes in detail how a specific course of instruction was validated and for what target population.
Validation Process	Testing instructional materials on a sample of the target population to insure that the materials are effective.
Validity	The degree to which a test measures what it claims to measure.

Value Engineering	Refers to the process of designing equipment or instruction to meet but not exceed the required outcomes. Ordinarily, it refers to the elimination of features or instructional objectives that hav not been demonstrated to be positively necessary.
Vigilance Level	General degree of watchfulness or attentiveness to what may come.
Visual Form	In media selection, refers to whether alphanumeric or pictorial characteristics are required in a learning situation.
Visual Spectrum	The type of color required of instructional materials. Some must be with full color, others may be with black and white or shades of grey.
Within-Course Tests	Administered during a course of instruction to assure that all students are "keeping up" with the learning objectives.
Work Elements	The element is the smallest component in the structure of a job. Elements combine to form a task, tasks combine to form a duty, and duties combine to form a job.

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